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UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service
Agricultural Research Service
Commodity Stabilization Service
Foreign Agricultural Service
Forest Service
and
Federal Extension Service Cooperating

PROGRAM

33rd ANNUAL AGRICULTURAL OUTLOOK CONFERENCE

Washington, D. C.

~~December~~ Nov. Dec. 28-~~January~~ 1, 1955

AEP 204 (11-55)

 887658

Monday, November 28

MORNING
(Thomas Jefferson Auditorium, South Building)

C. M. Ferguson, Chairman

9:00	Registration	
9:30	Opening of Conference	Ezra Taft Benson Secretary to Agriculture
9:45	World Situation	Thorsten V. Kalijarvi Acting Deputy Under Secretary for Economic Affairs, Department of State
10:15	Discussion	
10:30	Intermission	
10:45	Domestic Business Outlook	Nathan M. Koffsky Agricultural Economics Division, AMS
11:15	Discussion	
11:30	Current Problems of Economic Policy	Grover W. Ensley, Staff Director, Joint Committee on the Economic Report
12:00	Discussion	
12:30	Lunch	

AFTERNOON

Bushrod W. Allin, Chairman

2:00	Agricultural Outlook	F. V. Waugh, Director Agricultural Economics Division, AMS
2:45	Discussion	
3:00	Outlook for Exports	Gwynn Garnett, Administrator Foreign Agricultural Service
3:20	Discussion	

(Monday afternoon, continued)

3:35	Intermission	
3:50	Farm Costs	Kenneth L. Bachman Farm & Land Management Research, ARS
4:20	Discussion	
4:35	Farm Family Living	Margaret L. Brew Human Nutrition & Home Economics Research, ARS
5:00	Discussion	
5:15	Adjournment	

Tuesday, November 29

MORNING
(Thomas Jefferson Auditorium, South Building)

LONGER-TERM OUTLOOK

Nathan M. Koffsky, Chairman

9:30	General Economic Outlook	Dexter M. Keezer, Mc-Graw-Hill Publications
10:00	Agricultural Outlook - Consumer Demand	James P. Cavin Agricultural Economics Division, AMS
	Discussion	O. V. Wells, Administrator, AMS
10:30	Agricultural Outlook - Supply	Sherman Johnson, Director Farm & Land Management Research, ARS
11:00	Intermission	
11:15	Discussion	
12:00	Lunch	

AFTERNOON

Commodity Sessions

1:00 - 4:00 Livestock, Meat and Feed - Thomas Jefferson Auditorium
Bushrod W. Allin, AMS, Chairman

Department Resource People

Harold Breimyer	AMS	Ralph D. Jennings	ARS
Malcolm Clough	AMS	C. W. Crickman	ARS
Reed Phillips	AMS	Eloise S. Cofer	ARS
Arnold V. Nordquist	AMS	John C. Scholl	FAS
A. M. Hermie	AMS	M. A. Drisko	FAS
H .O. Doty	AMS	Raymond L. Suppes	CSS
Gerald Engelman	AMS	E. O. Stelzer	CSS

3:30 - 5:30 Family Living - Room 218-A
Frances Scudder, FES, Chairman

Outlook for Clothing Supplies and Prices — Vincent Covins, Bureau of Labor Statistics, Department of Labor

Clothing Consumption Trends — Helen H. Lamale, Bureau of Labor Statistics, Department of Labor

Estimating Money Savings and Time Costs of Homemade Cotton Dresses — Margaret L. Brew and Margaret Smith, ARS

4:00 - 5:30 Grass and Legume Seeds - Room 509-A
R. H. Teal, Oregon, Chairman

Department Resource People

George Edler	AMS	John M. Saunders	FES
W. H. Youngman	FAS	Wm. H. Evans	ACPS
David F. Beard	ARS	Wilson E. Westbrook	CSS
Ronald L. Mighell	ARS	Abraham D. Stoesz	SCS
C. S. Garrison	ARS		

4:00 - 5:30 Forest Products - - Room 3106
W. K. Williams, FES; Chairman

Department Resource People

H. R. Josephson	FS	R. K. Winters	FS
J. J. Burns	FS	A. M. Sowder	FES
M. M. Bryan	FS	Lee R. Paramore	FES

Wednesday, November 30

Commodity Sessions

MORNING

9:30 - 11:00 Dairy - Thomas Jefferson Auditorium
Max K. Hinds, FES, Chairman

Department Resource People

Herbert C. Kriesel	AMS	W. D. Bormuth	AMS
H. L. Forest	AMS	P. E. O'Donnell	AMS
H. A. Rust	AMS	L. F. Herrmann	AMS
Herbert D. Rorex	AMS	Mardy Myers	AMS
Benjamin Bennett	AMS	Gertrude Weiss	ARS
John L. Wilson	AMS	Ralph E. Hodgson	ARS
Don S. Anderson	CSS	Merton S. Parsons	ARS
Clarence J. Babcock	FAS	Earl O. Whittier	ARS

11:15 - 12:30 Fats and Oils - Room 3106
L. R. Paramore, FES, Chairman

Department Resource People

Sydney Gershben	AMS	V. H. Hougen	FAS
C. B. Gilliland	AMS	J. E. Thigpen	CSS
J. E. Barr	AMS	Ralph Raper	CSS
Ronald Mighell	ARS	T. B. Walker	CSS

11:15 - 12:30 Sugar - Room 4973
Tom Murphy, Sugar Division, CSS, Chairman

Department Resource People

Ole Homstad Sugar Division, CSS
Hans Hirsch Sugar Division, CSS

11:15 - 12:30 Family Living - Room 218-A
Gertrude S. Weiss, ARS, Chairman

Outlook for Food Supplies and Prices — Harry Sherr, Agricultural Economics Division, AMS

A Method for Estimating the Relative Costs of Home-Produced and Purchased Milk — Eloise Cofer, Household Economics Research Br., ARS

AFTERNOON

2:00 - 3:30 Poultry — Thomas Jefferson Auditorium
Homer S. Porteus, FES, Chairman

Department Resource People

Martin J. Gerra	AMS	Norris Pritchard	AMS
O. C. Hester	AMS	Harry A. Rust	AMS
Edward Karpoff	AMS	Peter L. Hanson	ARS
Richard Larkin	AMS	Ronald Mighell	ARS
Hermon Miller	AMS	Herbert W. Ford	FAS
Robert F. Moore	AMS	John Scanlon	FCS
Arnold V. Nordquist	AMS	H. L. Shrader	FES
Mary Swickard	AMS		

3:30 - 5:00 Cotton — Room 3106
E. P. Callahan, FES, Chairman

Department Resource People

Frank Lowenstein	AMS	E. Lee Langsford	ARS
Ronald E. Betts	AMS	F. Marion Rhodes	CSS
Sydney Gershben	AMS	Alice Linn	FES
Charles H. Barber	FAS		

3:30 - 5:00 Wheat — Thomas Jefferson Aud.
L. R. Paramore, FES, Chairman

Department Resource People

Robert E. Post	AMS	Marvin McLean	CSS
R. K. Smith	AMS	Arnold A. Garthoff	CSS
C. W. Jackson	AMS	A. J. Borton	CSS
E. J. Bell	FAS	Warren Bailey	ARS
R. O. Stelzer	CSS	Karl S. Quissenberry	ARS

3:00 - 5:00 Family Living — Room 218-A
Starley M. Hunter, FES, Chairman

Outlook for Consumer Durable Goods — L. Jay Atkinson, Office of Business Economics, Department of Commerce

General Discussion on Family Living Outlook

Thursday, December 1

MORNING

Commodity Sessions

9:30 - 10:30 Fruits - Room 3046
R. L. Childress, FES, Chairman

Dept. Resource People	
Ben Pubols	AMS
Joe Genske	AMS
Paul Nicholson	AMS
A. C. Manchester	AMS
Roy Royston	AMS
H. D. Rorex	AMS
Donald M. Rubel	FAS
R. J. Haskell	FES
J. R. Matchett	ARS

Peanuts - Room 2W
Howard Akers, FAS, Chairman

Dept. Resource People	
Sydney Gershben	AMS
C. B. Gilliland	AMS
George D. Harrell	AMS
J. C. Keller	AMS
D. S. Matheson	AMS
James W. Merrill	CSS
Warren K. Bailey	ARS
Volorous H. Hougen	FAS
D. Upton Livermore	FES

10:30 - 11:30 Vegetables & Dry Beans - Room 3046
W. E. Jones, FES, Chairman

Dept. Resource People	
Will Simmons	AMS
E. J. Holcomb	AMS
A. C. Manchester	AMS
Roy Royston	AMS
Harry Sherr	AMS
A. C. Cook	FAS
R. J. Haskell	FES
J. R. Matchett	ARS
Daniel McGarry	CSS

Tobacco Room 2W
Stephen E. Wrather, AMS, Chairman

Dept. Resource People	
Arthur G. Conover	AMS
Robert Hobson	AMS
Erling Hole	ARS
Donald M. Crooks	ARS
Clarence L. Miller	CSS
Elmer W. Hallowell	FAS
Earll H. Nikkel	FCIC

11:30 - 12:30 Potatoes & Sweetpotatoes - Room 3046
R.L.Childress, FES, Chairman

Dept. Resource People	
Will Simmons	AMS
E. J. Holcomb	AMS
A. C. Manchester	AMS
Al Mercker	AMS
Paul Nettleton	AMS
Roy Royston	AMS
Harry Sherr	AMS
A. C. Cook	FAS
R. J. Haskell	FES
Starley M. Hunter	FES
J. R. Matchett	ARS

Rice Room 2W
Robert E. Post, AMS, Chairman

Dept. Resource People	
John Marsh	CSS
Leonard Ellis	CSS
J. A. Satterfield	CSS
E. L. Langsford	ARS
Roy Adair	ARS
Wallace Ashby	ARS
Walter M. Scott	ARS
Leo Holman	AMS
P. B. Dwoskin	AMS
Dexter Rivenberg	FAS
Miss Thelma Willahan	FAS

AFTERNOON
(Thomas Jefferson Auditorium, South Building)

1:30 Panel on General Economic Situation - J. C. Bottum, Indiana
Chairman

State	- Isaiah Frank, Office of International Trade and Resources
Labor	- Aryness Joy Wickens, Deputy Commissioner Bureau of Labor Statistics
Commerce	- Charles Wardwell, Office of Business Economics
Agriculture	- O. V. Wells, Administrator, AMS - Gwynn Garnett, Administrator, FAS
Federal Reserve System	- Woodlief Thomas, Economic Advisor

3:30 Intermission

3:45 Strengthening Future Outlook Conferences - C. M. Ferguson, FES
Chairman

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UNITED STATES DEPARTMENT OF AGRICULTURE
Washington 25, D. C.

Tentative Program

33rd ANNUAL AGRICULTURAL OUTLOOK CONFERENCE

November 28 - December 1, 1955

Monday, November 28

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C. M. Ferguson, Chairman

9:00	Registration	
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12:30	Lunch	

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(Monday Afternoon, cont'd)

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Tuesday, November 29

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LONGER-TERM OUTLOOK

B. T. Shaw, Chairman

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11:15	Discussion	
12:00	Lunch	

AFTERNOON

Commodity Sessions

1:00 - 4:00	Meat Animals and Feed Grains Chairman - S. T. Warrington, FES	Thomas Jefferson Auditorium
3:30 - 5:30	Family Living - Session on Clothing Chairman - Gertrude S. Weiss, ARS	Room 218-A

4:00 - 5:00	Sugar Chairman - Lawrence Myers, CSS	Room 4966
4:00 - 5:30	Grass and Legume Seeds Chairman - R. H. Teal, Oregon	Room 509-A
4:00 - 5:30	Forest Products Chairmen - W. K. Williams and L. R. Paramore, FES	Room 3106

Wednesday, November 30

Commodity Sessions

MORNING

9:30 - 11:00	Dairy Chairman - Max K. Hinds, FES	Thomas Jefferson Auditorium
11:15 - 12:30	Fats and Oils Chairman - L. R. Paramore, FES	Room 3106
11:15 - 12:30	Family Living - Session on Food Chairman - Frances Scudder, FES	Room 218-A

AFTERNOON

2:00 - 3:30	Poultry Chairman - Homer S. Porteus, FES	Thomas Jefferson Auditorium
3:30 - 5:00	Cotton Chairman - E. P. Callahan, FES	Room 3106
3:30 - 5:00	Wheat Chairman - L. R. Paramore	Room 1349
3:00 - 5:00	Family Living - Session on Consumer Durable Goods and General Discussion on Family Living Outlook Chairman - Starley M. Hunter, FES	Room 218-A

Thursday, December 1

MORNING

Commodity Sessions

	Room 509-A	Room 2W
9:30 - 10:30	Fruits Chairman - R. L. Childress, FES	Peanuts Chairman - Howard Akers, CSS
10:30 - 11:30	Vegetables and Dry Beans Chairman - W. E. Jones, FES	Tobacco Chairman - Stephen E. Wrather, AMS
11:30 - 12:30	Potatoes & Sweet Potatoes Chairman - R. L. Childress, FES	Rice Chairman - Robert E. Post, AMS

AFTERNOON
(Thomas Jefferson Auditorium, South Building)

1:30 Panel on General Economic Situation - Chairman, J. C. Bottum, Indiana

State	- Isaiah Frank, Office of International Trade and Resources
Labor	- Aryness Joy Wickens, Acting Commissioner Bureau of Labor Statistics
Commerce	- M. Joseph Meehan, Director Office of Business Economics
Agriculture	- O. V. Wells, Administrator, AMS - Gwynn Garnett, Administrator, FAS
Federal Reserve System	- Woodlief Thomas, Economist

3:30 Intermission

3:45 Strengthening Future Outlook Conferences - Chairman, C. M. Ferguson Administrator, FES

Some State and USDA publications will be displayed in the Extension conference room No. 6028; this room also will be available for private conferences.

U. S. Department of Agriculture
Office of the Secretary

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WELCOME TO OUTLOOK CONFERENCE

On behalf of all of us here I am extremely happy to welcome you state extension people to this 33rd Annual Agricultural Outlook Conference. I know some of you; I wish that I knew all of you. But I am well acquainted with the work of the state extension services and the progress that you have made. Your work is not easy -- getting the results of research to the farmers, marketers and consumers; but you can take a great deal of pride in knowing that your work has contributed greatly to the welfare of all groups.

A very important phase of your work is marketing information and outlook for all of these groups. That is, supplying facts about current and past economic situations and possible trends which help people to make their own decisions on plans for the future. Being raised on a farm I became aware at an early age of the farmer's needs for outlook information. I watched all of our neighbors make decisions, long range plans, planting and marketing decisions with inadequate knowledge of the economic situation and inadequate knowledge of the outlook for the period ahead. Later in the operation of my own farm, I was brought to realize the need for reliable economic information.

Some years later I was fortunate enough to work for a number of years for the extension service in Idaho. This was gratifying work -- working with farmers, marketers and consumers in helping them improve their incomes and standards of living and it was there that I was brought face to face with the need for better outlook information.

I believe very strongly in outlook work. I believe that people in general as well as farm people deserve the very best economic and outlook information.

Talk by Secretary of Agriculture Ezra Taft Benson, welcoming delegates to the 33rd Annual Outlook Conference, Washington, D. C., 9:30 a.m. EST, November 28, 1955.

By and large, research and education have been successful in developing and extending beneficial knowledge about technical production practices. But good management also requires a wealth of information that reflects the tremendous impact upon farming that comes from economic and political forces arising from a myriad of developments and decisions made by many individuals, groups, and governments.

Farm people must have a sturdy base for their economic decisions. Should my sons stay in farming? If so, in what types of enterprises? Should I expand my dairy herd; when should I market my potatoes or apples? These are only a very few of the many types of decisions to be made daily. Farmers look to you, and more specifically to the county extension staffs, for information which will help in making more intelligent decisions. It is your job to see that they have the most accurate and complete information possible.

Providing farmers and marketers with the necessary outlook information is a tremendous task, but we have an impressive team available to do this work. Here in Washington, D. C., we have capable economic analysts preparing the many situation reports and other materials. The state extension staffs then take this information and in cooperation with their economic and other research people adapt the national outlook to their particular state and region. But, of course, this is only the beginning. Getting the information out to the farmers in ways they can understand and use becomes a team job within each state. The farm management people, the marketing people, the consumer information people and other staff members all must apply that information in their individual efforts to serve the folks on the farm. The problem of disseminating this information clearly, concisely, and convincingly is tough. I know that. And I know that the county agents must play a key role in getting out essential facts on the agricultural outlook, and home demonstration agents on the farm family outlook. How

(more)

well they play that role depends on you. Not only must they be supplied continuously with the current and adapted economic information, but they must be trained to interpret and apply this in helping solve the marketing problems of the people of their county. The training of your county staffs is also a continuous job. Thus, outlook work is a team job and there is no substitute for a smoothly working team to get the accurate and complete information out to farmers and others in the most usable form.

Good outlook information plays some other important roles as well. True, it provides sound economic facts and probable trends important in making individual decisions. But it also establishes a base for the many broader policy decisions that individuals as a group must necessarily make.

Although we still can strengthen the manner in which we develop the outlook information, we are far too weak in its application to groups as well as to individuals. We need, it seems to me, to do more pioneering in the simplifying and pointing up of outlook information that will clarify it better in terms of its realistic application by farm people and their groups to the perplexing situations they face. I understand that many economists and extension workers are facing up to this problem.

The Federal Extension Service tells me that many of you are seeking more effective ways of popularizing a great mass of statistics and analyses so they will be more palatable and easier to incorporate into farmer thinking and action. Surely, I want to endorse that heartily.

Outlook work is no longer an annual affair. It is now a year around program of providing information continuously as situations change. For, the farmers and all others are faced with continuous decisions. But it is important that each year you take time to study and analyze more thoroughly the broader issues in the year ahead which affect the farmers and others who will receive and

use this information. And that is one of the reasons for this outlook conference --to consider in more detail the outlook for the coming year and the economic situations lying behind the outlook. This conference does more however; it allows you people to exchange ideas among yourselves and with our analysts in the Department whose responsibility it is to prepare the many situation reports and other materials you use. All of the information gathered here is to help implement your continuous outlook programs.

Now with regard to this particular conference just beginning. The Department is making an effort to strengthen its outlook work. We are placing more emphasis on outlook work. We have set up a committee of state and department people to advise us in planning the conference, in developing sessions and materials which will be of the greatest possible use to you delegates and your associates in conducting outlook work.

In conclusion, I'd like to say that what you will do here is extremely important to farm people, to agriculture in general, and to the nation. Never doubt that for a moment. We want to be of any assistance we can in assisting you extension people with the tremendous task you face. This is truly your week. I know that you will make the most of it; we have resource people available to assist you and I know that they will be glad to help you in any way they can.

You have the Department's gratitude for the contribution you make ... and to that I'd like to add my own personal and very sincere thanks.

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U. S. DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
Washington 25, D. C.

Export Potential for United States Egg and Poultry Products

The United States poultry industry provides the American farmer with his third largest source of income. Gross receipts from poultry and eggs in 1954 totaled over 3.5 billion dollars compared to 3.2 billion dollars in 1946. This development is most significant when one realizes that the increased production of eggs and poultry meat was distributed through domestic retail channels.

The U.S. poultry industry is substantially larger than the industries of Denmark and the Netherlands. However, we export less than one-half of their annual exports. Denmark in 1954 exported over 78 million dollars worth of eggs and poultry products and the Netherlands exported almost 96 million dollars. Shell eggs were the major item exported.

U.S. exports of egg and poultry products for calendar year 1955, should be 33 million dollars compared to 29 million last year. Turkey meat exports should reach 8 million pounds in 1955 with Canada being the major importer. The main item we export is shell eggs which annually represents in value over 50 percent of our trade.

The U.S. poultry industry, unlike some farm industries, has never had to depend on an export market. However, our exports have increased from a little over 1 million dollars in 1937 to a predicted 33 million in 1955. Even so, this figure does not represent 1 percent of the farmer's predicted gross receipts for 1955.

Recently various members of the U.S. poultry industry have become interested in the export market because of their ability to increase production in a period of weeks and because the industry produces high quality merchandise which, at all or various times of the year, can favorably compete on the world market.

C.C. Warren, Chief, Commodity Analysis Branch, Dairy and Poultry Division, FAS, after interviewing numerous U.S. poultry exporters, reported increased industry interest in exports. Various associations are setting up committees to backstop FAS efforts to promote export trade. The Turkey Industry Advisory Committee, which met November 17 and 18, reported to Secretary Benson the following: "The Committee recognizes a need to develop export markets for poultry products, to the mutual advantage of both the United States and importing countries. The Committee recommends that the Department give prompt consideration to creating a committee of industry representatives from all branches of the poultry industry to assist the Department in developing expanded export outlets for poultry products".

Prepared by: Herbert W. Ford
Dairy and Poultry Division, FAS
For The 33rd Annual Agricultural Outlook Conference,
November 28 - December 1, 1955, Washington, D. C.

Presently our major market consists of countries in Latin America. Mexico is the largest buyer of United States egg and poultry products. In 1954 its purchases totaled almost $8.5 million, including approximately 700 thousand cases of market eggs and around 4 million baby chicks. The majority of chicks imported were straight-run, but as hatching egg production increases the demand for foundation stock should continue to rise. The Mexican Government, in its program to encourage consumption of certain basic foods, including eggs, is the major purchasing agent for shell eggs.

Venezuela is the United States' second largest market for egg and poultry products. It is a hard currency country and largely dependent on imported food stuffs, as well as manufactured items necessary in building a poultry industry. Other exporting countries continually try to obtain a share of this market.

Last year Venezuela purchased over 500 million dollars worth of United States agricultural and industrial products, including more than 6 million dollars spent for egg and poultry products. Practically all of Venezuela's imports up to 1953 came from the United States. However, during the spring months since 1953 Denmark and Canada have been successfully competing with United States market eggs. It is estimated that Venezuela imported 70,000 cases of eggs from Denmark during the 1955 spring production season. Indications are that Denmark and Canada will have large quantities of eggs for export during the spring months of 1956.

Cuba is another important market for U.S. poultry products. During 1954 Cuba imported 4.5 million dozen of market eggs; 70,000 pounds of live poultry; 280,000 pounds of killed poultry and small game; 120,000 pounds of eviscerated poultry and some 5 million hatching eggs duty free.

Colombia only in the last two years has become an important market for United States market eggs, chicks, and canned poultry. During 1954 Colombia imported 2,576,000 dozen market eggs, 904,000 baby chicks, and 1,006,000 pounds of canned poultry.

Poultry personnel of Foreign Agricultural Service are cooperating with industry in order to expand export markets. Efforts to ease or remove restrictions which bar United States poultry products from European markets are continuing. The United Kingdom presently enforces so-called sanitary restrictions (which are really economic) against United States poultry products. Western Germany, the world's largest importer of eggs and poultry products, has refused to issue dollar permits for the importation of United States poultry items. It is hoped that these restrictions and others of similar nature may be removed through the combined efforts of the United States Department of Agriculture and the United States poultry industry.

UNITED STATES DEPARTMENT OF AGRICULTURE
Foreign Agricultural Service
Grain and Feed Division

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WORLD FEED GRAINS SITUATION AS RELATED TO U.S. EXPORT POTENTIAL 1/

World Production

World production of feed grains has increased considerably since World War II. The 1955 crops of corn, oats and barley totaled 307 million short tons compared with the prewar 1935-39 average of 260 million tons.

The U.S. leads the world in the production of feed grains. In 1955 our production of the 3 feed grains mentioned above totaled 125 million short tons, or 40 percent of the world's outturn. In addition, our production of grain sorghums continues to increase, this year's near-record crop of 227 million bushels being much greater than the 1937-41 prewar average of 78 million bushels.

One of the outstanding features of the upward trend in world feed grain production since World War II, has been increases in U.S. corn crops. Our production in recent years has averaged over 3 billion bushels compared with about 2.6 billion during the prewar 1937-41 period. This increase has occurred despite much smaller acreages. The U.S. now accounts for over half of the world's corn crop.

Other important developments in the world production of feed grains during the past decade has been the marked increase in production of oats and barley in Canada, Australia and Argentina. Barley production also has increased sharply in the Near East and sorghums in parts of Asia, notably India. Production of feed grains in Western Europe, which was reduced considerably during and immediately following the war, has increased to a level somewhat above prewar because of a substantial expansion in barley. Partly offsetting the increase has been the decline in corn production in Argentina, historically the world's largest exporter.

Background of World Trade

Foreign trade in feed grains by the U.S. traditionally has amounted to a very small part, 2-5 percent, of our production. The bulk of our crop is used for feeding livestock.

World trade in feed grains increased during the early and middle 1930's and then leveled off at around 15-16 million short tons per year. In contrast to wheat, international trade in coarse grains recovered slowly after the war and did not reach the prewar level until 1953-54. Factors contributing

1/ Prepared for the 1956 Agricultural Outlook Conference, November 28-December 1, 1955, Washington, D. C.

to this slow recovery were the more pressing demands on shipping, presented by the postwar wheat requirements, the dollar shortage in most of the importing countries, and smaller livestock numbers in a number of countries. Although world exports are now approximately at the prewar level, there have been important shifts by countries and areas. Before the War, Argentina shipped well over half of the world's exports of corn, or about 6½ million short tons per year. During the postwar period, Argentina's exports generally have ranged from 1-2 million tons per year but have been considerably less in some of the recent years. This decline may be attributed to reduced acreage, some bad seasons, increased farm costs, shortage of labor and other factors. The following table shows the quantities of corn exported by Argentina, with other supply and distribution data for recent years, together with the prewar average.

ARGENTINE CORN: Supply and disposition data

Year beginning April 1	Carry-over at beginning	Production	Total supply	Exports	Total domestic disappearance	Carry-over at end
	Million bushels					
Average 1935-39	15	311	326	237	74	15
1944	5	344	349	25	224	100
1945	100	117	217	32	173	12
1946	12	140	152	84	53	15
1947	15	229	244	112	102	30
1948	30	205	235	80	125	30
1949	30	136	166	42	96	28
1950	28	33	61	18	40	3
1951	3	103	106	19	75	12
1952	12	80	92	24	63	5
1953	5	140	145	45	96	4
1954	4	175	179	(74)	(100)	5
1955	5	105	110			

Another highlight of the postwar trade in feed grains is the increased exports of barley and oats from Canada, although the 1954-55 Canadian exports of these grains were somewhat below recent years, following the smaller 1954 crop and the Section 22 U.S. import quotas. The 1955 crops of oats and barley in Canada were well above average, and Canada has large export availabilities of these grains this season.

CANADIAN OATS AND BARLEY: Supply and disposition data
(Million bushels)

Year beginning August 1	Supply			Disposition		
	Carry-over at beginning	Production	Total supply 1/	Exports including products	Total domestic disappearance	Carry-over at end
			OATS			
Average 1935-39	30.7	338.1	371.9	14.0	323.1	34.8
1944	108.5	418.1	526.6	85.8	342.6	98.3
1945	98.3	351.2	449.5	43.9	328.1	77.5
1946	77.5	360.9	438.4	29.8	339.1	69.5
1947	69.5	270.2	339.7	10.2	281.6	47.9
1948	47.9	345.3	393.4	23.2	309.6	60.5
1949	60.5	304.6	365.5	20.5	300.1	44.9
1950	44.9	401.8	447.7	35.4	317.1	95.2
1951	95.2	488.1	583.3	70.6	404.3	108.4
1952	108.4	466.8	575.2	65.4	365.4	144.4
1953	144.4	407.0	551.4	70.7	354.9	125.8
10-year average	85.5	381.4	467.1	45.6	334.3	87.2
1954 Prel.	125.8	306.8	432.6	22.2	329.2	81.1
1955 Prel.	81.1	403.8	484.9			
			BARLEY			
Average 1935-39	8.1	88.9	97.0	13.1	74.5	9.4
1944	45.9	187.3	233.3	39.4	164.9	28.9
1945	28.9	148.8	177.7	4.4	143.4	29.9
1946	29.9	146.9	176.8	6.9	141.1	28.8
1947	28.8	139.9	168.7	2.7	134.5	31.4
1948	31.4	152.3	183.7	21.7	132.3	29.7
1949	29.7	118.0	147.8	17.5	110.0	20.4
1950	20.4	167.5	187.9	23.1	111.3	53.5
1951	53.5	245.2	298.7	69.9	149.3	79.5
1952	79.5	291.4	370.9	118.9	140.4	111.7
1953	111.7	262.1	373.7	90.0	137.8	145.9
10-year average	46.0	185.9	231.9	39.5	136.5	56.0
1954 Prel.	145.9	175.5	321.4	77.1	157.1	87.2
1955 Prel.	87.2	251.8	339.0			

1/ Includes imports which are normally quite small.

The Danube Basin formerly was a rather important source for feed grain exports but in recent years only small quantities have been exported from this area.

Western Europe continues to be the world's largest importer of feed grains. In 1954-55, this area accounted for about two-thirds of the world's imports. Parts of Asia, notably Japan, are also rather important importers of feed grains, especially barley. Practically all of the feed grain imported into Western Europe is used for feeding livestock whereas much of the barley and grain sorghums moving into Asia are used for human food.

U. S. Exports

Our exports of the 4 feed grains (corn, oats, barley and sorghums), including the products, although accounting for only a small part of production, increased to about 5½ million short tons in 1954-55 from 3.8 million in 1953-54. A further increase appears likely this season, the rate of movement thus far in 1955-56 having been well above that of last season.

Before World War II, the U.S. exported only about 1.7 million short tons of feed grains per season. Our exports increased to a much higher level during the postwar years. It should be noted that a large part of our shipments a few years ago were made under various aid programs. During the period 1948-51, about 70 percent of the U.S. shipments of feed grains occurred in this manner.

United States exports of feed grains, including products

Marketing year 1/	Corn	Grain sorghums	Oats	Barley	Total
	Million bushels	Million bushels	Million bushels	Million bushels	1,000 short tons
Average 1935-39	50.8	2/ 0.2	4.2	9.8	1,730
1944	23.3	4.9	5.0	4.7	982
1945	31.5	0.9	21.2	9.3	1,470
1946	137.0	24.0	26.0	16.4	5,318
1947	15.1	16.6	20.7	24.1	1,797
1948	118.5	40.0	25.1	27.7	5,504
1949	112.2	31.6	15.6	21.5	4,792
1950	117.0	75.3	6.7	40.0	6,452
1951	81.6	62.1	4.6	31.0	4,841
1952	145.4	10.4	4.1	37.1	5,318
1953	103.4	15.3	3.4	18.9	3,832
1954	102.9	47.7	15.4	43.5	5,508

1/ Year begins October 1 for corn and grain sorghums and July 1 for oats and barley. 2/ Exports on calendar year basis.

Imports

Historically, the U.S. imports very little feed grains. However, substantial quantities of oats and barley were imported from Canada during and immediately following World War II. Also, in more recent postwar years, these grains were imported in large volume, at a time when large supplies were available in this country.

United States imports of feed grains, including products

Marketing year 1/	Corn	Grain sorghums	Oats	Barley	Total
	Million bushels	Million bushels	Million bushels	Million bushels	1,000 short tons
Average 1935-39	2/ 25.6	-	2.4	9.7	988
1944	6.1	-	68.7	37.9	2,180
1945	0.6	-	24.1	5.8	542
1946	0.6	-	1.0	4.3	136
1947	0.7	-	1.7	1.2	76
1948	0.7	-	19.3	12.1	619
1949	0.7	-	19.8	18.2	773
1950	0.7	-	30.2	13.9	836
1951	0.9	-	62.3	12.9	1,332
1952	0.9	-	68.6	24.9	1,720
1953	1.1	-	79.8	38.3	2,227
1954 3/	1.1	-	20.0	24.1	929

1/ Year begins October 1 for corn and grain sorhgums and July 1 for oats and barley. 2/ Includes drought period in mid-thirties when imports of corn were abnormally large. 3/ Preliminary.

Import Controls

The large quantities of oats and barley imported in recent years, when domestic supplies were large, prompted our Government to impose quantitative limitations under the provisions of Section 22 of the Agricultural Adjustment Act. Import quotas may be imposed under this Act when imports are interfering or threaten to interfere materially with programs or operations conducted by the Department of Agriculture. Section 22 quotas were first imposed on oats in 1953 and on barley in 1954. During the recent quota period, October 1, 1954-September 30, 1955, these import quotas were 40 million bushels for oats and 27.5 million for barley. However, neither quota was filled as only around 17 million bushels of oats and 19 million bushels of barley (including malt) were imported. Quotas were not reimposed after September 30, 1955. Therefore, we have no quantitative limitations upon the importation of oats and barley at this time, even though there are large supplies of these grains in countries that could ship to the U.S., particularly Canada. Our supplies are very large, however, and U.S. price support rates have been lowered on these grains. The present relationship between prices in the U.S. and Canada does not encourage large imports, and this situation is expected to continue. However, if it should change and imports should begin entering in large volume, it would again become necessary to impose import limitations.

Potential Foreign Market for U.S. Feed Grains

As pointed out earlier, only a small percent of U.S. feed grains are exported. However, our exports in 1954-55, about 5½ million short tons, were considerably larger than the 3.8 million tons shipped in 1953-54. Indications point to a further increase, at least a million tons, during the current marketing season. The prospective increase would be even greater if all feed grains were considered on a fiscal year (July-June) rather than a marketing year basis, as corn and sorghums shipments since July 1, 1955 have increased substantially over last year.

There may be some further increase in the world exports of feed grains because of the following:

1. Many of the importing countries are striving to become more nearly self-sufficient in the production of food grains. So long as this practice continues, the outturn of feed grains will not be as large as it otherwise would be.

2. Livestock numbers are increasing in importing countries, many of which are also feeding heavier per animal unit. The resulting increase in requirements may more than offset increased production in such countries.

3. Markets for certain mixed feeds, particularly poultry and dairy feeds in Latin America and other areas of the world, should expand.

The United States should share in the larger world exports of feed grains. As indicated earlier, our exports of feed grains are expected to increase about a million tons this season. One factor which should contribute to larger shipments of U.S. corn in 1955-56 is that Argentina will provide little competition for some time because of the short crop harvested in April 1955. We have very large export availabilities of each of the feed grains and the use of the special export programs now in effect should enable us to move larger volumes of these grains. These programs are:

1. Title I, Public Law 480, is providing a means for exporting a number of agricultural commodities, including feed grains, for the "local currency" of importing countries. Each of the 4 feed grains may be moved under this program. In 1954-55 (July-June) we shipped about 158,000 short tons of these grains under this program and should move considerable more this season.

2. Feed grains are also being exported under barter transactions. Under the provisions of the CCC Charter Act, as amended, and Title III, P.L. 480, CCC-owned agricultural commodities may be exchanged for strategic materials or other materials, goods, or equipment required by U.S. Government agencies. In 1954-55 (July-June), shipments under barter totaled about 8.4 million bushels of grain sorghums, 4.4 million bushels of corn, 5.3 million bushels of barley and 2.8 million bushels of oats. These shipments were equivalent to 530,400 short tons. Exports of feed grains under the barter program are expected to continue at or above the 1954-55 rate this season.

3. We also will continue to move feed grains under the programs administered by ICA (International Cooperation Administration). Under Title II, P.L. 480, shipments of agricultural commodities, including feed grains and some of their products may be made to foreign countries for relief purposes. Section 402 of the Mutual Security Act, which also is administered by ICA, is used to provide foreign assistance to finance the export sales of U.S. surplus commodities, including feed grains. Movement of feed grains under these two ICA programs totaled about 710,000 short tons in 1954-55.

In addition to the above special programs, the Commodity Credit Corporation has sold feed grains for export at prices generally in line with world prices. This permits regular commercial sales to be made at competitive world price levels.

By making use of the above special programs, and taking into account a probable larger world utilization of feed grains, the U.S. may well increase exports of feed grains by at least a million short tons in 1955-56.

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Dairy Session

33RD ANNUAL AGRICULTURAL

OUTLOOK CONFERENCE

November 28-December 1, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
Federal Extension Service
Washington 25, D. C.

THE DAIRY OUTLOOK SUPPLEMENT

Each year many extension workers who have other major responsibilities are called upon to present outlook information. Their problem suddenly becomes how to "get up to date" with important facts that make up the outlook.

This supplement was prepared for those called upon to present dairy outlook to provide information about (1) some of the background developments leading to the present situation in the dairy industry; (2) some of the important factors that affect or determine the dairy outlook; (3) some of the recent developments affecting the dairy industry; and (4) some recent analyses pertaining to the dairy industry.

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I. Bench Marks - Trends - Developments

The importance of the domestic market; population; milk needs of an increasing population; level of total milk production; changes in consumption, form in which sold, use of milk solids not fat; factors contributing to the surplus; and changes in the makeup of dairy herds.

II. Factors Affecting the Dairy Outlook

Factors affecting supply such as: milk cow numbers, production per cow, alternative enterprises, costs of production. Factors affecting demand such as: population, consumption changes, consumer purchasing power, Government programs.

III. Recent Developments Affecting the Dairy Industry

Marketing activities in foreign countries; the special school milk program; direct distribution of dairy products; and some adjustments farmers are making.

IV. Reports and Analyses

The Grange Report; the United States Department of Agriculture study and report to Congress on January 3, 1955; the United States Department of Agriculture barrier study; the Cornell University study on milk vs. butter; the Congressional hearings; data on household purchases of certain dairy products. (A brief description of these reports is given on page 22 followed by abstracts or summary statement.)

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AEP 205 (11-55)

I. BENCH MARKS - TRENDS -- DEVELOPMENTS

To aid you in "getting up to date" with the current dairy situation the follow- observations, generalizations, and trends will give you a birdseye view of some developments leading up to the present dairy situation.

A. Our dairy industry is primarily a domestic industry.

1. Practically all of our total supply of milk and dairy products are produced domestically.

(a) Historically United States foreign trade in dairy products has been around 1 percent except during and following World War I and World War II. Even at the peak of World War II in 1944 exports were only 5.7 percent of United States production.

(b) Practically all our imports on a milk equivalent basis have been below 1 percent of domestic production for a quarter of a century. On a value basis over 90 percent is cheese and casein.

B. The annual population increase is about equivalent to adding a city the size of Detroit each year to the dairy market.

1. If it occurred at one time and in one place we could better understand its impact on the dairy industry.

C. Two billion pounds of additional milk is needed each year for the increased population. (At present rates of consumption).

D. The rate of population increase has been greater than the rate of increase in milk consumption.

Total United States milk consumption in all forms increased:

1920-30: At twice the rate of population increase.
1930-40: At the same rate as population increase.
1940-50: At one-third the rate of population increase. The decline in butter consumption per person during this decade reduced total milk requirements.

E. For nearly a decade the increasing population obtained the milk and dairy products it consumed with little change in the amount of milk produced.

1. During the 10 years, 1943-52, preceding the recent dairy surplus situation United States production was fairly steady:

3 years - 116
3 years - 117
High point - 119 (1945)
Low point - 113 (1948)

2. Spurts in production occurred in:

1949 - an increase of 3.4 billion pounds
1953 - an increase of 6 billion pounds

Substantial purchases for price support followed each of these increases in production.

F. The needs of the increasing population were met from milk that was formerly used for butter.

1. We now consume about half as much butter per capita as we did in the 1930's. Butter consumption in the United States began to decline in the mid 1930's, dropping sharply during World War II and have leveled off at about the war-end level. Butter now takes about 25 percent of the milk fat produced in the United States compared with 45 percent in the 1930's.

2. For each 1-pound reduction in butter consumption per person in the United States about 3 billion pounds of milk were released for other uses. Between 1942 and 1943 the drop in consumption of 4 pounds of butter per person released about 12 billion pounds of milk. During the war, the milk so released was greatly needed for other uses.

3. Consumption of milk fat in all dairy foods per person declined from a high of 32.8 pounds in 1942 to a low point in 1953 of 26.9 pounds.

G. An increasing proportion of the milk produced has been sold as whole milk.

1. Of our total production the following proportions have been sold as whole milk:

1924	1934	1944	1954
29%	33%	54%	71%

H. The increase in the sale of whole milk resulted in a substantial increase in the solids not fat available for human food.

1. Prior to World War II about one-half of the solids not fat were kept on the farm. About half the milk was separated and only the cream was sold. At the present time about 70 percent of the total solids not fat produced in the United States is either consumed or processed into human food.

I. The increased supply of solids not fat has given rise to part of the recent surplus problem.

1. This shift toward increased utilization of solids not fat was given real impetus during World War II. Production was encouraged by incentive payments. At the same time consumption was encouraged through price ceilings which held consumer prices down. Also large quantities were shipped abroad as part of a program for feeding our allies and for our own troop use.

Between 1940 and the end of World War II the production of nonfat dry milk doubled and then doubled again by the end of 1953. During the war the increased supply was used for foreign and military use but these outlets declined rapidly after the war when production in other countries returned to more normal levels.

The shift in method of marketing milk from farms and the conversion of many plants to handling it led to the continued expansion in output of nonfat dry milk. This output was far in excess of the amount consumers in this country were willing to use at prevailing prices which were supported by government purchases.

J. There has been a trend toward larger and fewer dairy herds for many years.

1. Between 1944 and 1949 (when prices of milk and butterfat averaged above 100 percent of parity) the number of farms in the United States from which dairy products were sold declined 19 percent, yet the change in total milk production was less than 1 percent. The largest decline occurred on farms reporting less than 10 cows.

II. FACTORS AFFECTING THE DAIRY OUTLOOK

The dairy outlook is determined by a composite picture of all the factors affecting the dairy situation. To develop a composite picture we need to give consideration to the component parts--two of which are supply and demand. Furthermore, to establish some basic concepts about supply and demand as they affect the dairy industry we can make some generalizations:

Supply is influenced largely by:

> the number of milk cows times the production per cow. Historically, net imports, carryover stocks, and the production of some goat's milk have affected supply only slightly.

Demand is influenced largely by:

> the number of people times consumption per person. In recent years, nonfood uses such as casein and animal feed have been relatively unimportant. Also, exports on a whole milk equivalent basis have been less than one percent of total production except in wartime.

Prices of milk and dairy products guide production and consumption.

> In a free market the interaction of supply and demand determine the price. In general:
>
> When prices go up: production goes up, but consumption goes down.
>
> When prices go down: production goes down, but consumption goes up.
>
> Also the responses to price changes are not the same for all dairy products. The time elapsed between cause and effect may vary under different situations. For example, a price change seems to affect the purchases of butter more than it does fluid milk. Furthermore, promotional effort may modify the responses of consumers to price changes. In the case of production changes, a considerable period of time may elapse before a rise in price will bring forth increased supplies of milk.

For purposes of analyzing the factors affecting the dairy outlook, the two components, supply and demand, may be divided into lesser components which will be considered next.

A. Supply

1. Milk Cow Numbers

According to the latest figure on the number of milk cows in the United States for June 1955, the number of milk cows was down about 1.5 percent from June 1954. This decline in cow numbers follows two years of increase. Present numbers are still 14 percent below the all-time high in 1944 when there were 25.6 million head on farms compared with 22.1 million now.

Perhaps of more significance than mere changes in numbers is the shift in location and type of farming area of the present cow population. Losses of milk cow numbers over the past 15 years were sharpest in the Great Plains, Central Corn Belt, and Eastern Rocky Mountain areas. In these predominatly cream-selling areas many farmers who formerly kept a small number of milk cows as a side-line enterprise have now gone out of the dairy business. While these declines were taking place increases in cow numbers occurred in Wisconsin, New York, and Pennsylvania where production is marketed mostly as whole milk.

2. Production per Cow

Over the last 15 years the average annual increase in milk production per cow has been 1.3 percent. Latest information indicates that production per cow is continuing at a record level. In most of the years in which numbers of milk cows have declined, output per cow increased enough so that total production was either maintained or increased slightly.

Average production of milk per cow increased about 1000 pounds between 1944 and 1954. It may well increase at a faster rate now. The average for 1954 of 5,512 pounds per cow was still well below the average of 9,363 for DHIA herds which is within the realm of expectation for many dairymen. The increased "know-how" of management which includes breeding and feeding should bring this about. A decline in the number of cows in cream-selling areas, where the smaller herds and low producers have helped pull the average production per cow down, would help to raise the national average production. The effect of increased "know-how" is illustrated in the more rapid rate of gain in production per cow each year in DHIA herds. Since the beginning of the DHIA program in 1906, the national dairy herds have been improved at the rate of approximately 40 pounds of milk per cow per year while DHIA herds have been improved at the rate of approximately 85 pounds per cow.

With increasing emphasis on the solids not fat portion of the milk it is likely that in the future more emphasis will be given to total milk output per cow than to the production of butterfat.

3. Alternative Enterprises

A very important factor which many dairymen take into consideration in deciding whether to produce more or less milk or whether to produce it at all is the comparative advantage or disadvantage of alternative farm commodities. For example, take the following simple comparisons:

Price Ratios Comparing Milk Prices With Other Commodities

	1940	1945	1950	1951	1952	1953	1954
Milk-feed	1.29	1.42 (+10)	1.24 (-4)	1.29 (0)	1.28 (-1)	1.25 (-3)	1.19 (-8)
Condensary milk-hog	.26	.19 (-27)	.16 (-38)	.18 (-31)	.21 (-19)	.14 (-46)	.13 (-50)
Condensary milk-beef cattle	.18	.21 (+17)	.12 (-33)	.12 (-33)	.15 (-17)	.19 (+6)	.17 (-6)

The first comparison indicates the number of pounds of feed that was equivalent in value to one pound of wholesale milk for the years specified. In order to simplify the comparison the figures below in parentheses are calculated to show the percentage change since 1940. Note that in 1945 a pound of milk was equal to 10 percent more feed than in 1940 and in 1954 it was equal to 8 percent less. The next two comparisons are between condensary milk and hogs and beef cattle. Note that by 1954 hogs had become twice as good an alternative as they had been in 1940, because the same amount of milk was equal to only 50 percent as much hogs. Likewise note that in 1945 a pound of condensary milk was equal to 17 percent more beef than in 1940 and in 1953 to 6 percent more, but in 1950 and 1951 when beef prices were higher a pound of milk was equal to only two-thirds as much beef as it had been in 1940. The illustration is used to show how the relative values of the different commodities change over time as a factor affecting the decisions that farmers make in their farming operations

Returns per hour provide another common denominator for comparing alternatives:

Return Per Hour To Operator and Family Labor on Family Operated Farms

	1951	1952	1953	1954
Dairy Farms				
Central Northeast	$0.83	$0.66	$0.54	$0.51
Eastern Wisconsin	.79	.68	.50	.41
Corn Belt Farms				
Hog-dairy	1.24	1.11	1.03	1.07
Hog-beef raising	.91	.84	.49	.38
Hog-beef fattening	2.25	1.56	1.09	1.76
Cash grain	2.35	1.81	1.18	1.62
Spring wheat farms (Northern Plains)				
Wheat-corn-livestock	1.60	.11	.61	.42

Source: Farm Costs and Returns, 1954 (with comparisons) Agriculture Information Bulletin No. 139, United States Department of Agriculture, June 1955.

Note the variation from year to year in the same type of farm and the variation among types. These variations are caused by a number of factors. Perhaps the changing price level is of prime importance. Other factors such as yield are affected by weather, fertility, and variety. Management, quality of product, and time of marketing are also important.

4. Cost of Production

Another factor affecting the milk supply is the cost of production. Recent experimental work has indicated many ways to reduce production costs. It has been shown that some dairymen in Michigan were able to produce milk for half as much as it cost others. In order to reduce the per-unit costs of production, farmers have in many instances increased output.

5. Other Factors

Other factors affecting the milk supply include such things as soil, climate, and topography. When farmers combine a number of the considerations which have been discussed so far into making decisions it may bring about changes in milk production. There is a considerable time lag between many production decisions in dairying and the actual changes in volume of milk. For example, a heifer calf born today will not produce milk for about two years.

It is easier to reduce the supply quickly than to increase it. A dairyman can sell his herd and go out of business in one day. If his animals are slaughtered it will take considerable time to replace that volume of production. If he sells to another dairyman or buys from other dairymen this results in transferring units of production--not disposing of or creating new units of production.

B. Demand

1. Population

Our increasing population is equivalent to adding a city the size of Detroit each year to the dairy market. If this occurred at one time and in one place we could better understant its impact on the industry. At the present rate of consumption the needs of our increasing population require about 2 billion pounds of milk annually. However, per capita rates of consumption have been declining until recently.

As population grows it is shifting too. These additions and shifts will not affect all dairymen alike. The biggest gains in population have been made in the western and southeastern States. In milksheds where population has grown faster than production, fluid needs have been met by expanding the milkshed, by shipping milk in from other areas or by diverting milk from manufacturing use.

The growth of urban population is having its effect on methods of milk distribution and in milk containers. More milk is being distributed in vending machines and stores and in larger size containers than formerly. The proportion of people over 65 has doubled in 50 years. This change is significant in developing and merchandising dairy products that meet the needs of this segment of our population.

2. Consumption Changes

a. Milk equivalent in all forms.

Taking the milk equivalent of all forms of dairy products, per capita consumption has shown a downward trend since 1940. Spread over the total period this decline has run about 7 pounds a year per person. This downward trend was reversed in 1954 with a gain of 11 pounds on a milk equivalent basis from 688 pounds in 1953, the lowest in 30 years, to 699 pounds in 1954.

The reversal of the downward trend is attributable mainly to increased distribution of fluid milk, butter, and cheese under programs financed in whole or in part by the Federal Government; to reduction in retail prices following the lower support prices that went into effect April 1, 1954; to increased incomes during latter 1954; and to increased promotional efforts of the dairy industry.

b. Milk equivalent of dairy products.

Significant changes in per capita consumption of dairy products since World War II have been increases in fluid milk, cheese, and ice cream, with declines in cream, butter, and more recently evaporated and condensed milk.

Percent Change in Per Capita Civilian Consumption of Dairy Products in 1954 Compared With 1935-39 Average and 1950, (Milk Equivalent)

	1935-39	1950
Fluid milk	+13	+ 2
Fluid cream	-20	- 5
Butter	-47	-17
Cheese	+38	+ 1
Evaporated and condensed	0	-16
Ice Cream	+84	+ 4
Total milk equivalent	-12	- 5

c. Milk Fat

Milk fat has always been worth more per pound than solids not fat. Consumption of milk fat per person declined from a high of 32.8 pounds in 1942 to a low point in 1953 of 26.9 pounds. The amount consumed through different dairy products shifted far more than these figures indicate. The amount of decline in butter use was partly offset by increased use in other dairy products.

d. Butter

Total production of butter in the United States began to decline in the mid 1930's, dropping sharply during World War II and has leveled off at about the war-end level. Butter now takes about 25 percent of the milk fat produced in the United States compared with 45 percent in the 1930's. Per capita consumption of butter since the 1930's has dropped nearly one-half. It was down to 9 pounds in 1954 from a prewar level of nearly 17 pounds. During this same period the consumption of margarine has more than doubled. The shortage of fats in World War II resulted in demands for the removal of restrictions against yellow margarine. Consequently, the sale of yellow margarine was legalized in 26 States between 1944 and 1953, leaving only two at the present time that prohibit its sale. Also the Federal excise tax of 10 cents per pound on yellow margarine was removed in 1950.

The decline in consumption of butter has been one of the major problems of the dairy industry. The use of vegetable oils has brought about a cheaper table spread. There is no clear-cut evidence showing a nutritional superiority for butterfat. Even if some substance is discovered in butter that makes it superior nutritionally to margarine is it not likely that science may then discover how to make it and add it to margarine? Current dietary habits are in the direction of reduced intake of fat for many consumers. Also other products are competing seriously for the consumer's dollar. The price competition from margarine has been intensified. For many years the ratio was 2 pounds of margarine for the price of one pound of butter, Recently that ratio has increased to about 2.4 pounds of margarine for the price of one pound of butter.

e. Solids not fat

Per capita consumption of solids not fat increased 9 pounds in the last decade. During and since World War II a large proportion of the solids not fat that was formerly retained on the farm and was not used for human food has been shifted to human use. Presently we are using about 70 percent of our total production of solids not fat in the human category compared with about 50 percent two decades ago. While the use of butterfat has been declining the use of most dairy products containing solids not fat has been increasing.

This shift toward increased utilization of solids not fat was given real impetus during World War II. Production of milk was encouraged by incentive payments. At the same time consumption tended to be encouraged by price support ceilings which held consumer prices down. Actual consumption was limited by supply controls, such as rationing. Also large quantities were shipped abroad as part of a program for feeding our allies and for our own troop use. It was estimated that the shift from sales of cream to whole milk during World War II was made by a quarter of million farmers.

Between 1940 and the end of World War II the production of nonfat dry milk doubled and then doubled again by the end of 1953. During the war the increased supply was used for foreign and military use but these outlets declined rapidly after the war when production in other countries returned to more normal levels.

The shift in method of marketing milk from farms and the conversion of many plants to handling it led to the continued expansion in output of nonfat dry milk. This output was far in excess of the amount consumers in this country were willing to use at prevailing prices which were supported by Government purchases.

3. Consumer Purchasing Power

A high level of economic activity with personal incomes running at a high rate is a factor in creating a strong demand for milk and its products.

No one know what the more distant future has in store. Some of the adjustments that might be expected to affect the dairy industry if purchasing power declined are: possibly an increased use of the new popular instant milk powders at the expense of fluid milk; probably more store and vending machine sales and larger containers for fluid milk; dairies might step up discount pricing for home deliveries to large consumers to maintain sales. It is quite likely that butter would face stiffer competition from margarine. Demand for ice milks or low fat ice cream would probably increase relative to the more expensive kinds of ice cream, even more rapidly than at present.

4. Government Programs

To the extent purchases of dairy products for price supporting purposes are made by the Government, this operation becomes a factor of demand. On the other hand, these purchases when held as stored products become a factor of supply. When commercial stocks of dairy products become scarce the stocks held by Government can be sold which tends to keep prices from rising.

An indication of the effect of government purchases of dairy products for price support was given in the report of the U. S. Department of Agriculture to Congress on January 3, 1955, which stated ". . . In appraising alternative methods for supporting dairy prices, it is of interest to consider the situation that probably would prevail in the absence of a price-support program. With milk production showing some signs of stabilizing and continued high levels of employment and incomes, prices to farmers for manufacturing milk and butterfat over the next 2 or 3 years probably would average moderately below the present support level, possibly in the neighborhood of 70 percent of parity, if the support program were terminated. The average price for all milk, including fluid milk, would show a higher percentage of parity. These price projections assume that present Government stocks would be liquidated so as not to compete with current production and that import controls would be continued. . . . For some period, relatively greater declines could be expected in prices for manufacturing milk than for fluid milk, which are stabilized by many factors not closely related to the support program. In 3 or 4 years some increases in relative prices of beef cattle are likely, which would have a deterring effect on milk production and thereby would help improve the dairy price picture. Even with no support program, it is probable that domestic prices would continue above world prices so there would be no significant increase in exports. On the other hand, large imports would occur if import controls were removed, and prices and incomes would be depressed."

For additional information about Government purchases and utilization of dairy products see the Dairy Situation, Agricultural Marketing Service, U. S. Department of Agriculture, November 21, 1955, pages 5 - 7, 17, 34 - 36.

III. RECENT DEVELOPMENTS AFFECTING THE DAIRY INDUSTRY

Considerable emphasis has been given recently to the possibility of expanding our markets abroad for agricultural products. Legislation was enacted in 1954 designed to further this objective. At the time of the 1954 Outlook Conference some of the proposals were presented. A brief summary of the more important developments of the past year is given below.

Legislation was also passed in 1954 designed to increase the use of fluid milk in schools in the United States. A statement of progress with respect to this objective is given below with additional information furnished about the National School Lunch Program and the Direct Distribution Program.

Adjustments to changing conditions in the dairy industry in recent years have brought about some important changes on farms, both in the way farmers handle the dairy enterprise and in ways they are supplementing the income from farming. Some observations of the two types of adjustments in two midwest states are reported.

THE CONTRIBUTION TO EXPANDING FOREIGN MARKETS FOR DARIY PRODUCTS THROUGH FOREIGN AGRICULTURAL PROGRAMS 1/

1. Developments since Last Year.

Expressed in terms of milk equivalent, total U. S. exports of dairy products in 1954 were almost 50 percent above 1953. However, commercial shipments of butter and cheese increased only slightly and nonfat dry milk fell off sharply. There were also slight declines in the commercial shipments of canned and dried whole milk.

Preliminary figures for the first nine months of 1955, as compared with the same period of 1954, indicate an upward trend of total dairy exports. While it is not possible to ascertain at this time the exact proportion of commercial shipments included in the table below, it is probable that a similar gain is being reflected in commercial exports as a result of the sales for foreign currencies and the competitive pricing actions which have taken place during this period.

Comparison of U. S. Exports of Specified Dairy Products, January-September 1954 and same period, 1955. 2/

(In thousands of pounds)

	1954	1955
Butter	1,144	12,925
Cheese	3,379	13,194
Nonfat dry milk solids	131,239	173,319

1/ Prepared by the Dairy and Poultry Division, Foreign Agricultural Service, for use in the 33rd Annual Agricultural Outlook Conference, November 30, 1955.
2/ As reported by the U. S. Department of Commerce.

2. Progress under The Agricultural Trade Development and Assistance Act of 1954 (P.L. 480, 83rd Congress).

Currently, agreements have been concluded with 20 foreign governments covering agricultural commodities having a market value in excess of $400 million. Included in these agreements are over 28 million pounds of butter; 4 million pounds of ghee; 4 million pounds of nonfat dry milk; 4 million pounds of cheese; 9 million pounds of evaporated milk and 2 million pounds of dried whey.

A portion of the foreign currencies received in payment for these commodities will be available for the purpose of further developing our export markets for dairy products. We have already requested the allocation of substantial sums from these funds which will be expended in South American, European and Asiatic countries where there exists a large potential demand for dairy products.

Projects are being devised for each of the countries where local funds will be available for market development purposes, as rapidly as agreements are reached with the governments concerned. These projects will include demonstrations of the advantages to health and productivity of increased consumption of dairy products. Sanitation in production and efficient distribution systems will be stressed. The need for quality controls and improvement of milk and its products will also be emphasized.

3. Developments under Section 402 of the Mutual Security Act of 1954.

Of the funds available under Section 402, the International Cooperation Administration has authorized the use of over $450 million for the procurement and exportation of surplus agricultural commodities, including over $14 million worth of dairy products.

4. Progress in Recombined Products.

Progress has been made in the last year in demonstrating the feasibility and the practicability of supplementing normal milk supplies and in providing milk in milk deficit areas by recombining. A marketing specialist demonstrated on a plant basis the actual recombining operation in the Caribbean and has visited a total of 12 Latin American countries explaining the value of recombined milk and dairy products. As reported 3/ interest has been shown and recombining has begun or is planned in several places in this area.

Work in the Far East on recombining has continued. Several factors have delayed the actual establishment of facilities, other than those previously reported, but progress is being made.

3/FAS Circular No. FD 1-55, March 1955.
FAS Circular No. FD 9-55, August 31, 1955.

5. Progress in Marketing Butter in the form of Ghee.

In the Far and Middle East, where butterfat is utilized mainly in the form of ghee, it has been necessary to tailor our export product to the commercial desires of the area concerned. The actual processing procedures used in the manufacture of ghee and ghee-type products and the consumer preference as to color, taste, body and texture have been determined. This information was made available to the United States dairy industry and cooperative efforts between the Dairy and Poultry Division of the Foreign Agricultural Service and interested firms resulted in a United States-manufactured ghee acceptable to the consumers in the Far East. There is a great interest in the shipment of American ghee, both by United States exporters and by Far Eastern importers. To date, no commercial shipments have been made but it is believed that in the near future the remaining problems, such as price, will be solved and that ghee will begin to move into these areas.

6. Placing of Dairy Products in U.S. Exhibits at International Trade Fairs.

Through the cooperative efforts of the Commerce Department and the Foreign Agricultural Service of the USDA, U.S. agricultural products are now placed on exhibit at Trade Fairs over the world. U.S. manufactured ghee was displayed at the Karachi, Pakistan Fair. An exhibit at which recombined milk and ice cream made from U.S. nonfat dry milk solids and anhydrous milk fat is being prepared for the International Trade Fair at Bogota, Colombia. Samples of the milk and ice cream will be distributed to fair visitors. The Foreign Agricultural Service plans participation with the Department of Commerce in several more fairs and a similar dairy products exhibit will be included.

7. Summary.

Government stocks of butter and nonfat dry milk solids are at the lowest point since June 1953. Total value of commerical exports of dairy products is gradually increasing. Dairy market development efforts are showing results. Recombining plants are being established in more foreign countries. Most obstacles to opening new markets for butterfat in the form of ghee have been eliminated. The outlook for dairy exports in 1956 appears to be favorable.

B. Increased Utilization Of Dairy Products Through

- The National School Lunch Program
- The Special School Milk Program
- The Direct Distribution Program

The National School Lunch Program

National programs aimed at improving the level of nutrition among school children have developed over a period of 15 years. In 1940, the Penny School Milk Program was established. Participating schools purchased milk from local dairies. Section 32 funds were used to reimburse schools for the difference between the selling price to children and the cost of milk to the school. These funds became available under Section 32 of the Act of August 24, 1935 which provides the Department of Agriculture with an annual appropriation (equal to 30 percent of the annual custom receipts) for the general purpose of expanding domestic and export markets for agricultural commodities.

In 1943, the Department established the School Lunch Cash Food Assistance Program. Schools operating nonprofit school lunch programs received cash payments to be used to make local purchases of food. The Penny School Milk Program was merged with this new program. Donations of surplus commodities continued, although the large wartime demand for food had greatly reduced the volume of purchases under Section 32.

In 1946, The National School Lunch Act was passed. It authorized the continuance of food assistance both in the form of cash payments and donations of Section 32 commodities. Section 6 of the Act authorized the Department to use a portion of the annual school lunch appropriation to make large-volume purchases of foods for the program.

To be eligible for food assistance under the National School Lunch program, participating schools must serve meals meeting nutritional requirements established by the Department of Agriculture. Each of the approved meal types includes one-half pint of milk as a beverage. This results in large purchases of milk by schools, thus helping to expand local markets for fluid milk. Moreover, by developing the milk-drinking habit among children, the program helps build the base for the expansion of future markets.

Three years later Section 416 of the Agricultural Act of 1949 authorized the donation of certain food commodities acquired under price support to school lunch programs, charitable institutions and needy persons in this country and to U. S. private welfare agencies for the relief of needy persons overseas.

In 1953-54, 10 of the 34 million children enrolled in secondary and elementary schools participated in the National School Lunch Program. They consumed 1,600 million half-pints of milk as a beverage. This was double the amount used by

participating schools in 1946-47, the first year of operation under the National School Lunch Act. Last year, 1954-55, further increases brought the number participating to 11 of the 35 million children enrolled in secondary and elementary schools with consumption increasing to 1,765 million half-pints of milk.

Some participatings schools -- chiefly because of their isolated location -- are not able to purchase a regular supply of milk of acceptable quality. These schools are permitted to serve meals without milk. However, State educational agencies (which are responsible for program administration within the States) have sought the assistance of State Departments of Agriculture and dairy groups to help schools overcome such supply problems. These efforts, together with the educational efforts of schools to impress children with the importance of drinking milk, have resulted in a marked decrease in the number of meals served without milk. During 1946-47, the first year of operation under the National School Lunch Act, 15 percent of the meals were served without fluid milk as a beverage. In 1953-54, 4 percent of the 1.7 billion meals served under the program were meals without fluid milk as a beverage. In 1954-55, this number was reduced to only 2 percent of the 1.8 billion meals served under the program without milk as a beverage.

The Special School Milk Program of 1954

The Special School Milk Program, announced by the Department on September 10, 1954 was designed to move more milk directly into consumption channels by assisting States and local communities to increase the service of milk in schools. During the 1954-55 school year a total of 8.7 million children in 41,400 schools participated in the program. An increase of 451 million half pints of milk was consumed by children above the normal consumption of the previous year. This increase in consumption of approximately 242,000,000 pounds of milk was equivalent to the total milk produced during June, 1955 in the State of Tennessee. Undoubtedly much of this milk would have gone to manufacturing uses had it not been available for consumption as fluid milk in the schools.

Changes were made in the program for the 1955-56 school year and came about primarily to permit more schools to more effectively encourage increased consumption and to eliminate some operating problems that limited its full development the year earlier. This is being accomplished by the reimbursement for all milk that is served to children in participating schools as a "separate item" — that is, in excess of the one-half pint that is served as a part of a Type A or B lunch under the National School Lunch Program. Also, provisions were established to insure that, as a result of Federal payments, the price of milk is materially lowered to children in participating schools as compared with the prices that would otherwise have been charged. Schools serving Type A or B meals under the National School Lunch Program may receive up to a maximum of 4 cents reimbursement for each half pint served in excess of the first half pint in a Type A or B lunch. All other schools may receive up to a maximum of 3 cents reimbursement

for all half pints of milk they serve to children under the program. Thus, the program will help stimulate increased consumption in those schools now serving milk, as well as encourage the establishment of milk services in more schools throughout the country. As of mid-October 1955, there were 58,516 schools approved for or had applications pending for participation in the program this school year. This represents a 41 percent increase over the first year of operation and includes some of the large city systems-- such as St. Louis, Kansas City and Los Angeles.

School officials are given wide latitude in deciding how and when the additional milk will be served in school. It might be served with the noon lunch or at any other time during the school day. There are no restrictions on the number of half pints of milk a child may drink each day. The service of milk in milk in many schools is limited because of the lack of adequate milk storage or service facilities in the school or because the school cannot obtain regular deliveries of sufficient supplies of milk. Many such problems can be solved on a local basis, through the cooperative efforts of the school, the dairy industry, and community groups.

The Special School Milk Program is being administered within the various States by the States educational agency. In those States that are prohibited by law from disbursing funds to private schools the Agricultural Marketing Service administers the program in these schools under direct agreement with the schools. Many State agencies have taken steps to enlist the active cooperation of other State agencies and of dairy industry associations to help stimulate interest in the program and assist schools in overcoming milk procurement and delivery problems.

The Direct Distribution Program

A total of 761 million pounds of dairy products from the inventories of the Commodity Credit Corporation were moved into consumption channels in 1954-55, through donations to nonprofit school lunch programs in this country and to needy groups both here and overseas. This represented an increase of 431 million pounds of dairy products over the previous year.

The quantities of the various manufactured dairy products distributed during the last two years were:

	Million Pounds	
To domestic recipients:	1953-54	1954-55
Butter	72	109
Cheese	45	85
Nonfat dry milk solids	29	79
Total	146	273

	Million Pounds	
To needy persons overseas: (through U. S. private welfare agencies)		
Butter (includes butter for butteroil)	60	128
Cheese	31	88
Nonfat dry milk solids	93	272
Total	184	488
Grand Total	330	761

These dairy products were made available to 15 million persons in this country, including children in school lunch programs, immates of charitable institutions, needy Indians and other needy persons. Distribution to domestic recipients is accomplished under a plan whereby the Department ships the surplus foods in carload lots to central receiving points within the various States. An agency of the State assumes responsibility for handling and storing the foods and for their delivery to the final recipients.

A total of 19 U. S. private welfare agencies distributed these surplus dairy products to needy persons in 57 countries in 1954-55, which represents an increase of 17 countries over the previous year.

Thus, through Direct Distribution, surplus dairy products acquired by the Department are constructively used to improve the diets of groups with limited food budgets. Moreover, these donations can have a permanent effect upon the expansion of markets for dairy products. The use of nonfat dry milk solids by school lunch programs illustrates this point.

Nonfat dry milk solids were first introduced into the National School Lunch Program in 1946-47 when 800 thousand pounds were made available. The milk was offered to all schools for cooking purposes and for reconstitution as a beverage to those schools unable to obtain supplies of fluid milk.

Most local school lunch people were unfamiliar with the use of dry milk. Therefore, the Department undertook an information program showing how the milk should be handled and stored, proper reconstitution methods, and its cooking uses -- how it could be used to increase the nutritive value of sauces, stews and meat-loaves and how to prepare kitchen-made mixes for quick breads and cookies. State school lunch agencies followed up these efforts by including demonstrations of the use of dry milk in workshops held for school lunch managers and cooks.

As a result of these efforts, the school lunch market for nonfat dry milk solids has steadily expanded. Last year, 1954-55 school lunch programs used 22.5 million pounds of this milk from the surplus stocks of the Commodity Credit Corporation alone compared with 13.5 million pounds during 1953-54. With the continuing growth of school lunch programs, a permanent expansion in the market for nonfat dry milk solids is being created.

C. Some Adjustments That Farmers Are Making

The following information from Indiana illustrates how some farmers are adjusting to the dairy situation:

Dairy farmers in northern Indiana seem to be moderately optimistic about the future. Farmers who anticipate a profitable future, however, have adopted the latest cost-cutting techniques and have made their business more efficient than it was three to five years ago.

Two specialists in farm management at Purdue, contacted 107 dairy farmers in Elkhart, Marshall and St. Joseph counties to study different systems of management used. In general, farmers agree that still more improvements are needed in the dairy business. The majority of the farmers contacted feel that they must either invest additional capital to increase the size of their herd and the efficiency of their operations in the next few years or withdraw from the industry. Thirty-two farmers with milking parlors, who plan to stay in dairying indicated they will add an average of 4 or 5 cows (4.7) to their herds in the next few years. Fifty-six farmers with stanchion barns plan to add an average of only 1 to 2 cows (1.7).

Those farmers who have an opportunity to change their dairy operation are converting to the milking parlor and loafing barn system. Milking in a parlor is easier, saves labor, and is more flexible. Dairy farmers in the three northern Indiana counties showed considerable interest in bulk tanks and pipelines. Many look for bulk tanks to become compulsory in the future, citing reduced hauling charges and lower bacterial counts as the main reasons. Farmers who have bought bulk tanks, estimate that they will pay for themselves within 2 to 6 years with the present 15 to 20 cent premiums.

Another type of adjustment that farmers are making is illustrated in a report from Kansas:

Much is being said and written these days about the so-called "Farm Situation." A great deal of the talk is based on conclusions which are drawn from published statistics. Statistically, the total farm income divided by the total number of farmers indicates that the average farmer is not well paid for his time. What the statistics do not show is that perhaps as many as 50 percent of these counted as farmers are not fully employed at farming. For many, the farm is only a side line to their main source of income. For others, farm income is being supplemented with income from non-farm sources.

Among 215 farmers in a Kansas Farm Management Association, over 30 percent are earning some income from non-farm activities. This indicates that while each of these 215 families is living on the farm by their own choice, they do other things if the additional income is needed. Here is a list of non-farm activities of the members who have outside income:

Nature of off-the-farm employment	Number so engaged
Full-time job in town (40 hr. week or more) (These do farming in evening or on Saturday)	9
Part-time job in town (Butcher, mail carrier, school bus driver, etc.)	8
Wife works (Nurse, teacher, office work, beauty operator, postmistress, saleslady)	8
Full-time teaching	3
Full-time contracting (Dozer work with hired help)	3
Part-time dozer operators (Operate their own dozers)	4
Part-time public servant (Legislator, county commissioner, assessor)	3
Livestock trader and commission business	2
Operates other business (Implement, fertilizer, oil, plumber and electrician, motor court, insurance)	8
Sell feed and insurance (Part time)	2
Professional (Auctioneer, veterinarian)	3
Part-time manufacturing, buys seed on commission	2
Custom work (Trucking, corn shelling, field cutter, hay baler, etc.)	8
Retail milk and meat route, Army and Air Corps Reserve (Several hours per week)	4
Total	67

IV. REPORTS AND ANALYSIS

During the past year several extensive studies and reports pertaining to the dairy industry have been made. The information contained in them should be of value to persons interested in developing sound policies for the dairy industry. To provide you with sources of reference material several of them are listed below.

A. Barriers to Increased Consumption of Fluid Milk

This is a special report by the National Grange dated January 1955. The complete report is contained in a 124-page book. A condensation of the above report is entitled Obstacles to Increased Milk Consumption in a bulletin-size publication of 32 pages. The latter was given nationwide distribution. An abstract of highlights from the condensed report appears on later pages.

B. A Study of Alternative Methods For Controlling Farm Milk Production And Supporting Prices to Farmers For Milk and Butterfat.

A report submitted to the Congress on January 3, 1955 by the Secretary of Agriculture pursuant to the Agricultural Act of 1954 which directed the Secretary of Agriculture to study various methods of production control and price support applicable to milk and butterfat and their products. This 102-page report deals with four major considerations (1) methods for controlling milk production; (2) methods of supporting returns to farmers for milk and butterfat; (3) measures to increase consumption of milk and dairy products; and (4) other proposals. Copies may be otained from the Marketing Information Division, Agricultural Marketing Service, U. S. Department of Agriculture. An abstract of the summary of this report appears on later pages.

C. Regulations Affecting the Movement and Merchandising of Milk.

A study of the impact of sanitary requirements, Federal orders, State milk control laws, and truck laws, on price, supply and consumption dated June 1955. This 124-page study was prepared by a task force within the Department of Agriculture. An abstract of its summary and conclusions follow on later pages. Copies may be obtained from the Marketing Information Division, Agricultural Marketing Service, U. S. Department of Agriculture.

D. Milk vs. Butter

Milk vs. Butter, an article in "Farm Economics" published by the Department of Agricultural Economics, Cornell University, dated July 1955. This article deals with two important dairy products, milk for fluid consumption and milk for butter, and with the geographical controversy between the Midwest and the Atlantic Seaboard. The highlights of this 20-page article are abstracted on later pages.

E. Study of the Dairy Industry

Printed hearings of the testimony heard by the Subcommittee on Dairy Products of the Committee on Agriculture, House of Representatives, 84th Congress, first session. Testimony taken April 19-22, April 26-29, and May 6, 1955 is included in part 1 of the printed hearings. Testimony heard June 1-3, 1955 is included in part 2 of the printed hearings. For an abstract of the highlights of the 520 pages of printed hearings see page 34. The Federal Extension Service distributed two copies to each State for specialists in dairy marketing and production.

F. Data on Household Purchases of Certain Dairy Products.

A monthly report is available entitled "Household Purchases of Butter, Cheese, Nonfat Dry Milk Solids, and Margarine" from the Marketing Information Division, Agricultural Marketing Service, United States Department of Agriculture. At the time of the Outlook Conference in 1954 data on these products for only five months were available. With the additional information obtained during the past year, it was believed that some of the highlights and trends would be of interest to those attending the conference this year. A summary of trends and developments appears on page 46.

An abstract of BARRIERS TO INCREASED CONSUMPTION OF FLUID MILK

Weak Merchandising

Persistent weakness in milk merchandising over the years has probably been one of the most important of all the impediments to increased consumption.

Complacency and Resistance to Change

Serious complacency and resistance to change in the ranks of the dairy industry have had damaging effects. Prolonged concern with the protection of the status quo have sapped some of the vigor, boldness, and inventiveness which the industry now needs to meet the challenge of substitutes, imitations, and other goods for the consumer's dollar.

Lack of Coordination

The lack of a positive, coordinated effort by the industry, including producers, processors, distributors, labor, suppliers, and others closely associated with the dairy business, has continued as a block to realization of full consumption possibilities.

Labor Practices

Milk delivery labor unions have frequently exerted effective influence, through contract negotiations and otherwise, to restrict price competition and marketing innovations.

Sanitary Regulations

Sanitary laws and ordinances, often excessively detailed, have been used in a number of places in a manner that has effectively hampered competition. This has led, in turn, to semi-monopoly conditions, restrictions on milk supply, reduced variety and services, and timid merchandising efforts. Consumer prices, quite possibly, have been higher than they would have been in more competitive markets. The net effect of the restrictions has been to hold down consumption.

Wholesale and Retail Milk Price Control

In 12 States, price competition among wholesale and retail milk sellers has been legally eliminated. The minimum price per quart that consumers pay to retailers, and that retailers pay to wholesalers, is fixed by State boards or commissions.

Federal Problems

Areas of confusion and conflict arising from the application, interpretation, and administration of federal laws continue to hamper the dairy industry. At least indirectly, the result has been to limit milk consumption.

Concern About Weight

Milk sales have been hampered as Americans have become increasingly conscious of weight and calories. The belief that whole milk is a fattening food has gained credence. Some consumers, as a consequence, have reduced or eliminated their milk consumption.

An abstract of A STUDY OF ALTERNATIVE METHODS FOR CONTROLLING FARM MILK PRODUCTION AND SUPPORTING PRICES TO FARMERS FOR MILK AND BUTTERFAT

A study devoted to a consideration of major general methods that might be used to accomplish either of the objectives mentioned in the title.

It might be that the type and number of programs used would depend upon the severity of the surplus situation. In cases of minor excesses, only a purchase method might be employed. With a moderate surplus a purchase program may be used in combination with a system for payments. In a more severe situation, these two approaches might be combined with some measure to restrict milk production or sales.

A. Developments in the dairy industry in recent years have brought influences from two directions which tend to depress average prices for milk and butterfat.

1. Demand for butterfat has declined considerably.

2. Farmers have increased production and sale of milk as a result of many improvements in techniques of milk production, changes in economic relationships and continued price support activity.

B. Characteristics of the Dairy Industry

1. Milk production is a continuous process and it occurs in practically every county.

2. There is wide flexibility in the use of milk.

3. Production varies seasonally more than consumption.

4. Production and consumption of milk and dairy products respond slowly to price changes.

5. Milk and dairy products are important foods from a nutritional standpoint.

6. The domestic market is the principal outlet for U. S. milk production.

7. U. S. prices are substantially above the world level.

C. Ways of Supporting Prices Above an Equilibrium Level 1/

1. Restrictions on production or marketings.

a. Milk sales quotas

Difficult administrative problems would be involved in establishing equitable quotas for the approximately 1.5 million dairy farmers who would participate. These problems would be greater than for storable crops because milk is more perishable. Moreover, milk is produced and sold under different conditions from those for crops on which acreage

1/ Editor's note: Equilibrium level for a given market is where prices are such that total demand is equal to total supply.

allotments and marketing quotas have been used. Any production in excess of a producer's quota could not be stored by him for sale in a future period.

b. Limiting cow numbers

A culling program or cow allotments would probably reduce cow numbers but in time would be offset by increased milk yields. Also any large-scale removal of cows would affect beef cattle prices.

c. Feed restrictions

A basic difficulty with this approach is that much of the feed used for milk production comes from home produced forage and concentrates.

2. Buying and withholding from the market a portion of the supply.

a. Dairy product purchases

Under this method quantities would be removed from the market that would not move into consumption at the equivalent of support prices. (This is the method now in use.)

b. Problems:

(1) Sales of dairy products back to the market generally cannot be depended upon as a major outlet for dairy products acquired under support programs.

(2) Commercial export sales in large quantities are likely to disturb foreign markets for dairy products.

(3) School lunch and welfare uses can take only about 6 percent of the yearly farm marketings of milk and butterfat.

(4) The increase in consumption by military personnel as authorized in the Agricultural Act of 1954 is also limited--probably less than 1 percent of the total supply.

(5) The purchase method involves purchase contracts, storage, re-inspections, sales, donations and detailed accounting for control of operations. While this method is administratively feasible the accumulation of inventories creates serious storage and quality-maintenance problems.

(6) By holding domestic market prices above foreign prices, the purchase method of support tends to attract imports of dairy products which, unless restricted would increase Government price support purchases and materially interfere with the support program. Also, the chances of exporting dairy products are reduced.

3. Making payments to compensate for the difference between prices actually received and the support objective.

Commodity Credit Corporation made direct payments to farmers on milk and butterfat from October 1943 through June 1946 under wartime authority. Additional legislation now would be necessary to authorize such a price support method. This method would result in the consumption of the total available supply in commercial market outlets. Domestic prices would be less attractive to imports. The method would require a large administrative staff to receive, check and pay about 1.5 million applications in each payment period.

Another experience of World War II involved Commodity Credit Corporation payments to processors of Cheddar cheese and payments to dealers in a number of fluid milk markets. Payments to processors and dealers, like direct payments to farmers could result in the consumption of the total available supply in commercial market outlets.

D. Comparative Costs of Purchase Method and Direct Payments

The direct purchase program differs considerably in several respects from any one of the variants of the direct-payment types of programs. With respect to the cost to the Government, the outlay would be substantially greater under a system of direct-payments than under purchase and diversion arrangements such as now conducted. This would be true even if there were no recovery from products purchased. Under a direct-payment program, however, the retail prices of dairy products would be lower and consumption would be greater than under a direct-purchase operation. Despite larger consumption in the former case the cost to the population at large (retail cost plus taxes to support the program) would be essentially the same under the two programs. . . . Under the purchase-and-diversion method the cost to consumers would be 8,300 million for product and $150 millions in purchases, $8,450 millions in total. With direct payments, consumers would spend $8,200 million for product and, with the 350 millions in direct payments, the total bill would be $8,550 million, cost of reaching stability.

In other words, consumers' total cost would be $100 million greater under direct payments than with purchase and diversion but consumption would be greater by the equivalent of 3.2 billion pounds (and exports would be up by 0.5 billion pounds). Under the purchase-and-diversion method it is possible for the cost of operation to be reduced by sale of product bought. Moreover, such sales or gifts to civilians would tend to increase consumption.

Abstract of Summary and Conclusions in a study entitled:

REGULATIONS AFFECTING THE MOVEMENT AND MERCHANDISING OF MILK

Objectives of the Study

1. To determine whether and how much various types of laws and regulations interfere with, burden, or obstruct the movement of milk.

2. Whether and how much they interfere with the adoption of less costly or more effective marketing methods.

Where possible, the study measures the effect of regulations on price, production, and consumption.

Effect on Prices

Regulations of one type or another accounted for most, but not all, of the amount by which prices to milk producers were above a Midwestern base price plus an allowance for transfer costs in 1953-54. If these regulations were modified to permit the free movement of milk, prices to about one-fourth of the producers of fluid milk in the United States would probably decline an average of about 48 cents per hundred pounds. In some markets the declines would range up to 75 cents to one dollar per hundred pounds.

However, these declines would be offset to some extent by an expected increase of about a quarter billion pounds in consumption of fluid milk. The increase in the total long distance movement of milk would be relatively small, partially because price incentives would be lessened as regulations were modified.

Limitations on Movement into some cities.

Sanitary regulations hinder or prevent the movement of milk into a substantial number of cities. Some markets prohibit outright the entry of milk from beyond specified limits. Others burden such entry by insisting on their own inspection and then delay or refuse to inspect, or levy discriminatory fees. Still other markets differentiate their regulations from those of surrounding areas without apparent necessity.

Sanitary regulations do not unduly burden the movement of milk where consistent with requirements most widely regarded as essential. Neither do they have this effect in areas where authorities inspect milk promptly whenever and wherever requested or accept milk produced and processed under effective supervision of other areas that have about the same regulations. In a majority of cities sanitary regulations either were not considered unduly restrictive, or did not result in prices out of line with those at potential sources of milk.

Effect of State Milk Controls

State milk controls over the prices to producers use a variety of restrictive measures and policies, mainly to offset their inability to control prices paid for milk purchased in another State. The State control act or the orders issued under it may establish the limitation, or the administration of sanitary or other laws of the State may be coordinated with the price control program. In part, the difficulties with out-of-State milk are a result of efforts to maintain State prices above a level at which milk from out-of-State sources, priced on a classified price basis, would be available. But if out-of-State milk is unregulated, it may be available at manufacturing milk prices, or at "blend" prices. In such cases, a State would have difficulty in maintaining its own prices even if they were in line with prices of milk available from outside sources under comparable classified price plans.

State milk controls over resale prices tend to limit the opportunities for introducing innovations in marketing methods and practices or for using aggressive methods for promoting sales. The prices that are set, and the differentials for type of product, container, or service give the control agency power to favor or discourage one method or another. The regulations of trade practices, needed to make the price regulation effective, also tend to curb merchandising efforts.

Effect of Federal Milk Marketing Orders

Federal milk marketing orders, issued by the Secretary of Agriculture upon approval by producers of milk for the market which is to be regulated and after a hearing is held, establish minimum prices which dealers in specified marketing areas must pay to producers under classified price plans. They contain some provisions which may be so written as to be unduly restrictive. Among the latter are terms establishing the basis on which plants may participate in market-wide pools; fixing the rate of compensatory payment on unpooled milk; and fixing the differential in price for plants at a distance from market.

The general policy has been for the Federal orders to avoid requirements which might unduly impede the movement of milk: "new producer" provisions authorized by the Marketing Agreements Act have been omitted; base and surplus price provisions avoid restrictive rules; and it has not been required that all milk sold in the marketing areas be subject to all the provisions of the marketing order.

Market-wide pools require some protection against the entry of plants which are more interested in receiving equalization payments than in supplying the market with Class I milk. This is obtained by establishing perfor-

mance requirements for pool plants, and requiring a compensatory payment into the pool for umpooled milk which enters the market. The amount of payment may be kept to a minimum by computing it on some basis other than manufacturing milk values in some circum - stances, by not requiring the payment to be made when the quantity of pool milk is low relative to Class I sales, and by allowing for transportation from the plant at which the milk is first received from producers.

Effect of Highway Load Limits

Differences between States in highway load limits for trucks and lack of universal reciprocity for licenses add to trucking costs. These were not cited by dairy company officials as material factors affecting the movement of milk. However, most long distance movement of milk is by truck. The delivered price of milk shipped from Wisconsin to New York consists of about 35 percent for transportation and 65 percent value of milk. A 10-percent reduction in transportations costs would be equivalent to nearly one-half cent a quart at such distances.

Sanitary restrictions Declining

There are indications of a trend toward less restrictiveness in sanitary regulations, though many of the motives for making them restrictive are still at work. Reports of restrictions repealed or successfully challenged in court outnumbered those upheld or newly enacted about 2 to 1 in 1946-54. The expansion of distribution areas has brought about a reduction in the number of obstacles, but intermarket movement of bulk milk still tends to be more or less free as local supplies are short or plentiful. Work of the National Conference on Interstate Milk Shipments, and rising professional qualifications of milk sanitarians are tending to correct some of the conditions that restrict the movement of milk.

An abstract of MILK VS. BUTTER

Most of the nation's butter is produced in the Middle West and most of the milk for fluid consumption is produced east of the butter area. The area along the Atlantic Seaboard from Maine to Chesapeake Bay is the most conspicuous part of the fluid milk area.

While there has always been some conflict between these areas, it was not until recently that the differences became unusually conspicuous.

Have there been any changes in the industry that may explain this sudden shift? One of the first things to do is to look for changes in incomes or profits obtained from the production of milk. From pre-World War II to the late forties and early fifties the profits from producing milk rose to levels beyond the dairymen's wildest dreams. During the 27 years, 1914 to 1940, the cost-account records indicate that profits occurred about one-fourth of the years; whereas from 1941 to 1951 there was a profit every year. The average annual profit per 100 pounds of milk for the seven profitable years prior to 1941 was only 22 percent of the average profit during the next eleven years.

During the early 1950's all the dairymen's profits vanished. This abrupt decline may have accentuated the sectional controversy.

Nine years had been required to convert the last loss, 7 cents, to the highest profit, $1.39, but only five years were required to reverse the process:

Rising profits				Falling profits			
Low year	High year	Losses	Profits	High year	Low year	Profits	Losses
1939	—	$0.07	—	1948	—	$1.39	—
—	1948	—	$1.39	—	1953	—	$0.01

Price supports, marketing agreements, war, consumer demand and so on were common explanations. An important but much less discussed explanation of the rising profits was the striking increase in the efficiency of milk production.

On April 1, 1954 the support prices for dairy products were reduced one-sixth, from 90 to 75 percent of parity. More important, however, was the percentage change in prices following the reduction. It would appear that the Wisconsin prices of milk for butter and cheese during May-July 1954 were about 5 percent less than during January-March of that year after adjusting for seasonal changes. The New York farm price of milk declined 6 percent, about in proportion to the Wisconsin declines. At the retail level butter declined 10 percent, cheese 3, fresh fluid milk 2 while evaporated was unchanged. The widely discussed reduction in the support program, therefore, did not account for much of the dairymen's declining profits.

General deflation was more important than the shifting support levels but was less spectacular. Its severity depended on the period considered. From March of 1954 to 1955 prices of all farm products declined 5 percent and of all dairy products 3 percent. During the two years 1953-55 dairy products were marked down 10 percent by the general decline and during the three years

1952-55, almost 20 percent. The percentage changes in prices paid to producers for all farm and all dairy products were as follows:

March to March	All farm products	All dairy products
1954-55	- 5	- 3
1953-55	- 8	- 10
1952-55	- 16	- 18

In general, dairy products declined with the deflation of all farm products. This, no doubt, adversely affected profits. The unprecedented decline in the price of discarded dairy cows was the most important factor causing profits to decline.

Normally dairymen sell annually about 20 percent of their milk cows, as canner cows. From January 1952 to January 1955 the price of canner cows on the Chicago market declined 51 percent. The decline in the Chicago market was reflected in prices of canner cows everywhere. Since prices of discarded cows are not readily available in published form, the severity of the losses may be observed by studying the prices of dairy cows. A dairy cow is nothing more or less than its beef value plus the capitalized value of its ability to produce milk. During the same period that the price of canner cows declined 51 percent at Chicago the Wisconsin price of milk cows declined 46 percent. The price of dairy cows in New York declined from $311 to $168 per head, or 46 percent.

Prices paid to producers for milk utilized for butter production and for fluid consumption both declined from the pre-Pearl Harbor days to the early 1950's. Furthermore, the declines were almost exactly alike, 22 and 23 percent, respectively. The gross incomes of producers of milk utilized for butter declined 55 percent relative to the gross incomes of producers of all foods. The gross incomes of producers of milk utilized for fluid consumption were substantially unchanged, declining only 2 percent. Never before in statistical history had there been such a striking discrepancy in the gross incomes of producers of these two utilizations. These reductions were not due to unequal declines in prices. They were due to a phenomenal shift in the volume of milk for these two utilizations. The volume of milk for butter declined 42 percent and the amount of milk for fresh use rose 28 percent.

In the case of milk, the close relationship existing between costs and prices prior to Pearl Harbor was not projected into the war and postwar periods. Prices rose much more rapidly than costs, 127 and 83 percent, respectively. This is the first time that milk prices and costs departed from one another for any considerable period of time during the past four decades.

Apparently the support program was about as effective in raising Midwestern producer prices of milk for butter relative to costs as the support program plus the marketing agreements were in raising New York producer prices of milk.

The similarity between prices is indicated by the comparison of percentage changes in prices paid to United States producers for milk for butter and milk for fluid consumption relative to all foods, both of which declined about 20 percent.

A more detailed comparison of the New York pool price of milk and prices paid Wisconsin producers of milk for butter is shown by expressing the New York price as a percent of the Wisconsin price. During 1952 the New York and Wisconsin prices per 100 pounds were $4.76 and $4.00, respectively. The New York price was 19 percent higher than the Wisconsin price. This was the lowest premium in more than forty years of statistical history. The nearest approximation was in 1916 when the premium was 20 percent. During the three years, 1951-53, the New York to Wisconsin ratio was low, averaging 121 or only a little more than the all-time lows of 1952 and 1916. Apparently during recent years Wisconsin producers of milk utilized for butter have fared better than New York producers.

Another method of looking into the situation would be to compare the prices of milk with farm prices of other farm products. During the early fifties Wisconsin prices of milk for butter relative to other farm prices were 2 percent greater than during pre-Pearl Harbor days. In New York State net pool prices of milk relative to New York farm prices of other products were 3 percent less.

Prices Always a Guide. Prices always guide production and consumption. Free prices keep production and consumption in equilibrium. Supported prices guide production and consumption but do not always keep them in equilibrium.

The support program raised Midwestern producers' prices for milk utilized for butter and nonfat dry milk solids somewhat more than the price supports and marketing agreements raised Eastern producers' prices for fresh milk for fluid markets.

The support program, however, raised retail prices of butter relative to its chief competitor, oleomargarine, to such an extent that butter consumption was adversely affected. The support program and/or marketing agreements did not raise retail prices of fresh fluid milk relative to other proteins and consumption rose.

From the standpoint of the housewife butter is the most expensive fat to eat and milk the cheapest protein. From the standpoint of the producer butter is the lowest-priced outlet for milk. Fresh milk for fluid consumption, on the other hand, is the highest-priced.

An abstract of STUDY OF THE DAIRY INDUSTRY, Hearings before the Subcommittee on Dairy Products of the Committee on Agriculture, House of Representatives, 84th Congress, First Session, May and June 1955.

At the outset the chairman of the subcommittee pointed out that during the early period of the hearings the testimony was to be largely informational in nature, designed to give the committee members, and to put into the record, a background of factural data about the factors affecting the production and distribution of milk and dairy products. He further indicated that the committee was aware of a substantial diversion of viewpoints within the dairy industry itself about a number of specific questions and issues, and that persons holding views on those issues would be heard later. The witnesses at the first part of the hearings were all officials from the operating branches of the Department of Agriculture and appeared as technicians and experts in their particular field and not as spokesmen on policy for the Secretary's office. Because much of the information of the type presented by Department of Agriculture personnel is included in the Dairy Situation, November 1955, only brief reference will be made to their testimony. More emphasis here will be given to that testimony giving divergent points of view.

The Federal Milk Marketing Order Program was presented by H. L. Forest, Director of the Dairy Division, Agricultural Marketing Service, U. S. Department of Agriculture. The information pertained to 56 Federal milk marketing orders in effect at the time the data were prepared. It was indicated that about one-third of the milk sold wholesale by farmers was marketed under the terms of the Federal milk marketing orders then in effect. In 1954, more than 186,000 farmers sold 27 billion pounds of milk to purchasers who were required to pay the minimum prices established by these orders. Among other points discussed were the procedure for the development of an order; classified pricing of milk; pooling; State resale price fixing; compensatory payments; and percent of milk utilization in different markets.

The next statement summarized mainly the dairy price support operations of the past year. It was presented by H. J. Emery, Chief, Program Analysis Branch, Livestock and Dairy Division, Commodity Stabilization Service, U. S. Department of Agriculture.

A statement entitled Some Significant Trends in the United States Dairy Industry was presented by H. C. Kriesal, Agricultural Economics Division, Agricultural Marketing Service, U. S. Department of Agriculture.

A report on the study of Barriers to Increased Milk Consumption was presented by Gordon K. Zimmerman of the National Grange. An abstract of this report appears on preceding pages of this supplement.

The next statement on Federal Milk Marketing Orders and their effect on the dairy industry in various parts of the country, was presented by Kenneth Hood, Assistant Secretary of the American Farm Bureau Federation. In opening his testimony, he reported that at the organization's annual meeting in December 1954, the following policy statement was adopted: "We favor the use of marketing agreements and orders where producers develop feasible plans." This policy statement/followed by a preliminary report of a study being conducted.

The summary of our preliminary report is as follows:
Federal milk market orders, in one form or another, date back to 1933. They have become a recognized technique for determining the price to producers for milk sold for use in fluid-milk markets. In the 22-year period which has elapsed since the start, Federal milk orders have developed into a control program quite generally accepted by the industry as performing a permanent and justifiable Government function.

Although dairy farmers delivering to fluid milk markets quite generally support Federal milk orders, some criticism has developed mostly from manufactured-milk areas where no such procedure is available.

Those who criticize the operation of Federal milk orders do so in most instances on three grounds: First, that the class I pricing is too high and thus encourages over production which must go into additional manufactured milk products, thereby further depressing the price of all manufactured products; second, that class II or manufacturing-milk prices are below those customarily paid in manufacturing-milk plants so that the resulting margin permits handlers to offer the end products at prices below those quoted by Midwestern plants; and third, that Federal orders create artificial barriers to the movement of milk.

The purpose of Federal orders as stated is to establish and maintain such orderly marketing conditions for milk and its products in interstate commerce as will establish parity prices to farmers; provided that whenever the Secretary finds from a public hearing that parity milk prices for a contemplated order are not reasonable in view of feed prices, feed supplies, and other economic conditions affecting market supply and demand in the area, then he shall fix such milk prices in the orders as will (1) reflect such factors, (2) insure an adequate supply of pure and wholesome milk, and (3) be in the public interest.

The scope of the act is quite broad. No order can be made applicable until it has been submitted to a producers' referendum. At least two-thirds of the affected producers must vote in favor of a Federal order before it can be made effective. This applies in the case of a Federal order containing a marketwide pool. When the contemplated order involves a handlers' pool approval of 75 percent of the producers is required.

In either case the percentage is based on the number of producers voting. It is also true that any Federal milk order must be terminated whenever more than 50 percent of the affected producers favor its termination. Approved cooperatives are permitted to cast the vote of all their members en bloc.

Provisions for pricing milk in a Federal order quite generally include:
(1) A classified price plan based on the use to which the milk is put.
(2) Distribution of returns to producers on the basis of pooling, with either a marketwide or an individual handler pool.
(3) Authority for deductions from the payments due producers who are not members of a cooperative for market services similar to those performed by cooperatives.
(4) Provisions for financing the administration of the order, auditing of distributor's reports, and dissemination of marketing information.
The authority in the act to prohibit unfair methods of competition and unfair trade practices in the handling of milk has not been used in milk orders. The original marketing agreements and licenses fixed resale prices as well as producer prices, but this practice was discontinued within a short time. The June 1937 legislation specifically prohibits the inclusion of any provision for price fixing at the resale level in milk orders.

So far this discussion of terms and provisions has been confined to those which are permissive. There are certain actions which cannot be taken in a Federal milk order. One of the most important is covered by section 608c (G) of the act which specifies that:

> No order applicable to milk and its products in any market area shall prohibit or in any manner limit, in the case of the products of milk, the marketing in that area of any milk or product thereof produced in any production area in the United States.

This sentence presumably is designed to prevent milk orders from being used as trade barriers to the shipment of milk in interstate commerce.

Many of the Federal milk orders contain provisions commonly known as compensatory payments. They are not included in orders which utilize the individual handler pool. These are payments which regulated milk distributors under a given order, must make to the market pool on the fluid milk they buy from non-regulated sources of supply. The amount of such payments is designed to insure that the cost of unregulated milk shall be equal to the cost of regulated milk, and insures uniform product cost between competing handlers. These provisions are among the most misunderstood and the most controversial of all the provisions included in Federal milk orders. They have been labeled trade barriers by some critics.

The use of compensatory payments is a comparatively new development in Federal milk orders. They have been referred to by some critics of Federal milk orders as a means whereby the fluid milk price in a given order may be protected at an abnormally high level, in that they discourage importation of outside milk through the assessment of an additional payment on such milk.

Proponents of the use of compensatory payments claim, among other things, that they are necessary in order to protect and make possible continued use of the classified price system.

From the evidence, it may be concluded that a compensatory payment provision in some Federal orders constitutes a deterrent to the interstate shipment of milk from a source which is willing to ship to a market only when the price is attractive but which reserves the right to play the field and withdraw its milk at any time that a more lucrative outlet beckons. Whether this represents a barrier is debatable.

The second major criticism of Federal milk orders is that in some orders the price of milk used for manufactured products is set at a level which results in a wide margin, wide enough to permit handlers to price the end products of such operations below prices determined by the narrower margins common to manufactured-milk plants in the Middle West. There is no conclusive evidence, either to support or disprove this criticism.

The considerations about Federal orders were summed up as follows:

1. Milk is a product which lends itself to regulation. Because it is perishable, and has wide use as a nutritious and protective food, it is surrounded with regulations. The production, processing, and distribution of milk is subjected to sanitary standards and other rigid controls. Such regulation is generally accepted as being in the public interest.

2. Federal milk orders have been developed over a 22-year period and have now reached the status of a control program quite generally accepted and looked upon as a permanent part of fluid milk marketing.

3. Federal milk orders are authorized under the Agricultural Marketing Act of 1937. They grew out of demoralized conditions in milk markets occurring during the depression years when producer prices were completely unrealistic.

4. Classified milk pricing as an accepted method for providing the most satisfactory returns to producers on fluid milk markets was developed before the institution of Federal milk orders.

5. Stability of prices within fluid milk markets requires what might be termed some rules and an umpire in the interests of both producers and consumers.

6. Determination of prices, based on a record of testimony prescribed in public hearings presided over by a Government representative, has much to recommend it for a product such as milk which is characterized by perishability, seasonal fluctuations in supply, and the need for some kind of continuing arrangement between producers and handlers.

7. Federal orders are optional with producers operating in a market and must be terminated if a majority of the producers in a market favor termination.

8. No order applicable to milk in a market area may prohibit or in any manner limit the marketing in that area of any milk or product thereof produced in any production area in the United States.

9. Milk under regulation in a Federal order must be priced at levels which are determined to reasonably reflect economic conditions, to assure an adequate supply and be in the public interest.

10. Use of compensatory payments is based on the belief: (a) that they are necessary to the maintenance of a classified pricing program in connection with marketwide pools; and (b) that a fluid-milk supply, because of the perishability of the product and the sanitary standards surrounding the production and distribution of fluid milk, and because it is in the public interest, should be an assured supply rather than an intermittent one.

11. Compensatory payments are not levied against sources which are willing to become a part of a regular market supply and to assume the responsibilities of such a supply. Federal orders contain no barriers against shipments of milk under the above-named conditions.

12. Prices are not rigid.

13. It seems doubtful that termination of all Federal orders would result in any appreciable increase in interstate shipments of milk.

A reference from the Federal Milk Order Study Committee (Technical Committee established by the Secretary of Agriculture, May 27, 1953) was inserted for the record as follows:

> "There is little evidence that Federal orders have increased production more than has occurred in other markets or areas of the country. Due to shifting of plants and producers, the receipts of milk at plants subject to a Federal order do not necessarily reflect changes in area of production. In the Northeast, which is the only area for which fairly comprehensive figures are available, total milk production in relation to class I utilization has not been as high as it was in the forties."

A final point in summary stated that the Federal order program was not perfect. Mistakes have been made which indicate a need for more careful consideration of the pricing provisions, but in general, Federal orders have served a useful purpose. Federal milk orders should be periodically reappraised from the standpoint of possible improvement rather than complete condemnation.

The next statement was a brief progress report on a dairy research project which was still under way, by John A. Baker, assistant to the president for legislative service, National Farmers Union. It was stated that some of the human and institutional factors had been considered in their study and that some of the tentative conclusions would be presented.

1. Milk is unquestionably in politics and has been for over 100 years. Moreover, this has by and large generated good results rather than bad, for the general public as well as for milk producing family farmers.

2. We are convinced that the current problems of milk must be solved politically, that is to say legislatively. The iconoclasts and radicals who propose sensational propositions of returning to a free market in milk are almost surely wrong. Looked at from the consumer end, milk and its products are in the nature of a public utility. Milk and its distribution in sanitary condition is that important to the general public.

3. This organization's exploratory studies lead to the tentative conclusion that local and State control over sanitation and disease prevention relation to milk and its products may be out dated.

4. Dairy farmers, as sellers, in a market of monopsonistic buyers find themselves at a distinct bargaining disadvantage.

5. Most, if not all, of the economic, or price and supply affecting aspects of city milk sanitary regulations were adopted prior to and in the absence of State and Federal programs designed to even the bargaining power of producers.

6. The same observation is probably true with respect to State milk price and supply regulations.

7. There is lack of any conslusive evidence that indicates that all dairy farmers generally have benefited from State and local economic milk regulations. Many milk producers have benefited but many have not.

8. Federal milk market orders are designed to insert order and morality into fluid milk handling and distribution to replace chaos and instability as well as to even up the milk producers bargaining position so as to raise his income. Milk marketing orders have fulfilled the first function, that order and stability have been brought to the handling and distribution of fluid milk and cream. As to the other function, no conclusive evidence has been shown that milk marketing orders have very greatly reduced the supply of fluid milk to city consumers nor appreciably raised the retail price. Neither has there been conclusive or impelling evidence that milk market orders have benefited some milk producers at the expense of others.

9. Local and State regulations in combination with Federal milk orders, even if improved in various ways, provide only incomplete protection even to milk producers who participate in milk order markets and none at all to milk producers outside such areas.

10. Retail prices of fluid milk are higher than they need to be, while at the same time the returns received for milk production by farmers both inside and outside Federal order areas is lower than is consistent with healthy farm family life and a continuous ample production of milk.

The following information about a program adopted by the National Farmers Union dairy producers conference in Madison, Wisconsin, January 22-23, 1954 was submitted for the record. The highlights of this proposed program included:

1. Enactment by Congress of an amendment to the Agricultural Act of 1949 that will direct the Secretary of Agriculture to support the prices of milk, butterfat, and its products at 100 percent of parity and that will authorize the Secretary to utilize dairy production payments to farmers, in combination with other approved methods of support.

2. Extension of the dairy price support program at 90 percent of parity.

3. Revision of procedures in the administration of the price support program so that the announced level of support will be attained.

4. Revision of the parity formula.

5. Opposition to enactment of sliding scale, variable, or flexible price support levels for any farm commodity.

6. Favor of an expanded agricultural conservation practices program.

7. Consumers cannot maintain and increase their purchases of milk and its products unless they have adequate incomes. Therefore the adoption of economic policies that will promote economic expansion was recommended.

8. Adoption of special means and programs to enable low-income consumers and relief recipients to increase their purchases of milk and its products.

9. Establishment of a security stockpile of milk products.

10. Adoption of import and export policies under negotiated international agreements, so that imports of milk and its products will not reduce returns to American dairy farmers below 100 percent of the parity price, and that export markets for United States milk products will be expanded.

11. Increase the consumption of milk and its products through educational programs for consumers, increase the purchasing power of low-income families, intensify research on marketing and transportation, develop consumer cooperatives, and a broad public appeal for industry, business, and trade unions to raise wages out of profits without increasing prices so as to increase purchasing power.

12. Legislation to authorize accelerated depreciation for tax purposes and a capital credit program to enable owners of processing plants to replace obsolescent plant facilities with modern flexible multi-purpose dairy plants.

13. A loan and service agency similar to the Rural Electrification Administration to assist in the establishment of a nationwide system of dairy marketing and processing cooperatives.

14. The exploration by farmers of the possibilities of setting up national or regional marketing organizations.

15. Increased appropriations for research in dairy marketing.

16. Increased appropriations for the school lunch program.

17. The continuation of milk marketing orders and that they be reexamined for their effect on the transfer of milk from one local market to another, and their effect on locations of production.

18. That costs of distributing dairy products be investigated and appropriate legislation be enacted to insure producers of receiving a fair share of the consumers' dollar.

19. Establishment of a national grading system for butter and cheese, and that such products be grade labeled in terms understandable to consumers.

20. That Congress enact legislation directing the Armed Forces to use butter and milk products.

21. Better coordination of State standards of sanitation and quality inspection across State lines to facilitate product quality improvement.

22. Appropriation of greater funds for public and private, including cooperative, research and educational activities designed to discover and encourage the adoption of improved dairy farm techniques that will reduce the costs of milk production and improve the quality of milk when it leaves the farm.

23. In connection with the use of parity production payments as a method of supporting the returns from the sale of milk, butterfat, and other perishables, that a maximum limitation be placed upon the amount of such payments that can be earned by an individual farmer in a single year.

A presentation of factual material concerning the economics of the dairy industry by Stewart Johnson, Professor of Agricultural Economics, University of Connecticut. The information was presented under three headings - (1) production and consumption trends, (2) Federal and State regulations affecting milk marketing, and (3) the school milk program. Under topic (2) with respect to pooling it was stated that if a classified price plan is used, if regulations are set up on an individual market basis, and if market-wide pooling is used, then a method of determining pool participation is necessary. The mechanism known as compensatory payments is designed to meet this need for a method of determining pool participation. If free entry into a market is to be had, as required under the enabling legislation, such a provision is an essential part of market-pool Federal orders.

Since compensatory payments have attracted considerable criticism, one way to avoid their use is to establish handler pools. But in large markets like New York, to do so would jeopardize efficiencies in transport and manufacture made possible by a market wide pool, and if done suddenly, would likely lead to demoralized markets throughout the Northeast as class I outlets were sought. Partial pooling, either by having one kind of a pool part of the year and another kind the other, or by providing for only a specified partial payment into or out of an equalization fund, appears to have merit, but has not yet been tried under any Federal order.

Use of quota plans was widespread in the late 1920's and 1930's. Many markets abandoned these plans during World War II. But they are now coming back. Fourteen Federal order markets were using quota plans in January 1954. A year later, in January 1955, the number had increased by 8, to a total of 22. Under all present quota plans in Federal order markets new bases are established each year. Also the quotas are not transferable freely from person to person.

The quota plan is the only device known for attacking the weakness of the classified price plan in holding out the attraction of a higher price for extra milk than what it is worth. Additional output of either new or old producers is worth only its value in the lowest priced class, yet without a quota plan individual producers have the incentive of the blend price before them when deciding whether to make additional milk. This tends toward overproduction. A weakness of quota plans is their high administrative cost. Many people object to them because they make it more difficult for newcomers to enter the dairy business. But others answer that the way of entry for newcomers might better be made difficult, and their energies used in other pursuits, if the market is already oversupplied with milk.

With respect to the effect of Federal orders on producer prices--Federal orders "stabilize prices upward" resulting in higher net incomes to producers. Their income-raising intent is a recognition of the fact that the level of price not only determines cost to consumers but incomes for producers. The amount of gain is difficult to determine. One estimate, that of Dr. Leland Spencer of Cornell University, is that the gain in producer price from State and Federal control in the period since 1933, exclusive of the war years, was 5 percent in the New York milkshed. To a fluid milk producer, consequently, Federal orders in a sense are a counterpart to the price-support programs for storable products like corn, wheat, cotton, tobacco, rice, and peanuts.

Information to provide factual background relating to factors which must be considered in any program involving prices paid farmers delivering milk to fluid milk markets, by J. P. Mason, Director of the Division of Economics of the National Milk Producers Federation. A statement of policy agreed upon by a joint committee of the Milk Industry Foundation, the Evaporated Milk Association, and the National Milk Producers Federation was submitted along with other testimony. It was pointed out that these organizations are the main groups that deal with the mechanics of Federal orders every day. Some of the policy highlights are: From the viewpoint of fluid milk producers these Federal milk orders have undoubtedly achieved their objectives. Particularly in the older markets the orders are well understood, and although improvements can be made, that part of the industry operating under the program views it not only as permanent but also as generally constructive. The factors involved in establishing and maintaining Federal orders are extremely complex. Each order must be geared to local conditions yets must maintain a proper interrelation between order markets and the general dairy economy. Under these circumstances it is not unreasonable to have questions raised regarding the program. There is reason to believe that improvements could be made in the understanding and appreciation of the objectives and policies of Federal milk market orders as well as in the handling of many specific problems and provisions of such orders.

Suggestions have been made which cover such matters as the need for a comprehensive guide on practices and policies, improved communication, expediting actions, hearing notices, several basic policies on long range pricing, compensatory payments, and other problems.

A resume of the most important findings of a research study on milk regulations and milk quality by A. C. Dahlberg, Department of Dairy Industry, Cornell University. This study was reported in publication number 250, by the National Research Council, entitled "Sanitary Milk Control and its Relation to the Sanitary, Nutritive, and Other Qualities of Milk" and has been distributed throughout the country. A summary statement in the testimony with respect to the effect on prices follows: No doubt there are differences in costs of producing milk on the farm, due to variations in the requirements of sanitary regulations, which were reflected in higher prices paid for milk for bottling than for manufacturing. However, since many other and more important factors affected milk prices, there was no relationship between the details and rigidness of enforcement of sanitary milk regulations and the retail price of milk during this investigation. It is evident, though, that sanitary requirements for production of milk sometimes varied sufficiently to restrict movement of milk from one market to another.

To bring to date some of the things that had happended since previous testimony had been presented on July 7, 1953, by Roland W. Bartlett, Professor of Agricultural Economics, University of Illinois. This information included reference to the Chicago milk strikes of the early 1930's; facts about the operation of the Chicago Federal order; the amount by which the class I prices in specific markets exceeded the average class I prices in Chicago and Minneapolis-St. Paul, 1929 to 1954; and a comparison of changes in per capita milk sales in Chicago and New York. In the last comparison it was pointed out that between 1945 and 1954 per capita milk sales had increased 6 percent in Chicago compared with a decline of 17 percent in New York. The explanation offered was a slower rate of increase in per capita disposable income in New York than in Chicago since 1945, and a relative increase in store prices to consumers in New York as compared with those in Chicago.

Testimony pertaining to Federal fluid milk marketing agreements and orders and the changes that should be made in those regulations, as well as in the Agricultural Marketing Agreement Act of 1937, by Otie M. Reed, Washington Representative, the Joint Committee of the National Creameries Association and the American Butter Institute. The main points were summarized as follows:

1. It is the policy of the joint committee to work for improvements in the order system and the elimination of those features of orders which we think are inimical to the public interest and which operate to the disadvantage of producers of manufacturing milk.

2. The orders, while issued to provide an "adequate supply" of fluid milk in fluid milk markets, have as a matter of fact been instrumental in maintaining and increasing surpluses over fluid milk requirements.

3. The facts show that price structures in fluid milk markets are arbitrarily high, leading to the production of excess milk in fluid milk supply areas and in a reduction in consumption in these areas.

4. Compensatory payments operate to limit the movement of qualified milk into fluid milk markets operating under orders and tend to implement a high degree of local monopoly.

5. The practice of classifying "other source" milk in the lowest classes first tends to restrict the entry of qualified milk in fluid milk markets.

6. The arguments of the administrative officials of the Department of Agriculture and proponents of compensatory payments and down classification of "other source" milk, to the effect that these provisions are necessary in order for market pool orders to operate effectively, are unfounded.

7. For many years, orders operated without these provisions and we know of no reason why it should be necessary to include them in orders at this time.

8. If these devices are eliminated, we think such action will go far toward correcting the current inequities which orders now engender between fluid milk producers and manufacturing milk producers.

Information pertaining to sanitary requirements, by C. M. DeGolier, Deerfield, Wisconsin, President and General Manager of the Deerfield Creamery Co., and President of Madison Dairy Produce Co., Madison, Wisconsin, and President of the Wisconsin Creameries Association. The summary stated that while much progress has been made in developing more uniform sanitation codes in this country and the practices under such codes, we still have far to go. The evidence indicates quite clearly that many sanitation regulations serve no useful purpose as far as purity of the milk supply is concerned, but rather serve as devices to restrict the entry of pure and wholesome milk into markets from areas outside their usual sources of supply. Such regulations tend to wall off the local markets from the legitimate competition of other areas and grant local producers a high degree of monopoly. This leads to arbitrary pricing, over-production within the milkshed, reduced consumption in the markets, and greater surpluses of milk which must be manufactured into dairy products such as butter, cheese and the like.

Discussion of some of the self-help plans and proposed marketing quota and production control plans for the dairy farmer, by George Paul, President, National Creameries Association. It was indicated that the organizations represented did not believe it feasible or in the best long-run interest of the producer or consumer to attempt to limit production or marketings from farms in the United States. It is not believed such proposals are administratively feasible, and probably would do more harm than good to the dairy farmer over a period of time. The belief was stated that any production control, price support, or marketing quota plan that would be financed by the dairy farmer would not be fair. By this it was meant that the major difficulties now confronting the dairy farmer are due in large part to Government dairy programs during the war, and to the approval of Congress in permitting oleomargarine to copy the attributes of butter. A self-help plan of the joint committee of the National Creameries and the American Butter Institute was submitted.

Solutions to economic problems of milk, by James G. Patton, president, National Farmers Union, who presented other witnesses. It was recommended that support of returns on the family farm production be provided by Federal statute by means of production payments, by E. F. Bottomley, Vice President of Virginia Farmers Union. It was recommended that a workable and acceptable method of making milk eligible to be classified by Federal law as a basic

commodity be provided, by Kenneth Hones, president of the Wisconsin Farmers Union. The importance of expanded milk consumption by an expanding full employment economy and the significance of the milk for schools program was pointed up by J. Albert Hopkins, president of the Arkansas Farmers Union. Some observations on the dairy price and income situation in Minnesota and the nation were made by Edwin Christianson, president, Minnesota Farmers Union. Replacement of the present price-support program with a compensatory payment program and a food stamp plan was recommended by Dwyte Wilson, general manager of the Equity Union Creameries, Aberdeen, South Dakota.

A summary of the Farmers Union position was summarized as follows:

A. Consider basic problems to be:
 1. Underconsumption of fluid milk and milk products.
 2. Unnecessarily and distressingly low income of milk-producing farm families.

B. Measures to expand consumption of milk and its products:
 1. Enact measures to insure expanding full-employment economy.
 2. Federal funds to finance free milk for all school children, including administrative costs.
 3. Enact food allotment--food stamp--plan, H. R. 4577.
 4. Continue direct distribution to eleemosynary institutions, Armed Forces, veterans' facilities.
 5. After stable permanent milk price-support program at an adequate level has been enacted and established, revise class I milk-pricing formulas in Federal milk orders to reduce retail price of fluid milk.
 6. Nutritional education program.

C. Measures to protect incomes of milk-producing family farmers:
 1. Farmer returns on milk should be supported at 100 percent of parity price.
 2. Use production payments as method of support.
 3. Only family-farm volume of production would be eligible for payments.
 4. Favor enactment of authority for milk producers to use marketing quotas to keep production balanced with genuine consumer demand.

D. Establish, within appropriate bureau of United States Department of Agriculture a staff of qualified employees to provide technical assistance to State and local milk sanitation and pricing regulatory bodies to promote more rapid adoption of improved, simplified, and more uniform regulations.

E. Raise Commodity Credit Corporation sell-back prices on sales of dry milk to feed manufacturers, and on its stocks of butter, to 100 percent of the parity price.

Trends and Developments in Household Purchases of Butter, Cheese, Nonfat Dry Milk Solids, and Margarine 1/

Under the policy of increased emphasis on marketing research by the Department of Agriculture, additional information about the household use of certain dairy products and margarine is being obtained. It is made available to the public in monthly, quarterly, and annual reports.2/ At the time of the outlook conference in 1954, data for only 5 months had been obtained. The additional data obtained during the last year provide information on levels and trends of consumption of the various dairy products and margarine, and on some family characteristics and geographical differences that influence consumption patterns of these products.

The data are collected each week from a representative nationwide sample of 5,800 families who report food and household item purchases covering such variables as purchase volume, price paid, brand, and name and location of retail sales outlet. From this sample, referred to as the National Consumer Panel of the Market Research Corporation of America, estimates are projected to regional and national totals for use in the USDA reports on household purchases.

Monthly Data for U. S.

The monthly data on butter and margarine have indicated average purchases of butter at the level of about 58 million pounds and margarine purchases at about 90 million pounds. Related to total disappearance, these show that over 60 percent of total domestic use of creamery butter goes into household use while margarine purchases by householders make up about 90 percent of total domestic use. A study made in the fall of 1954 by a private research organization, Alfred Politz Research, Inc., indicated that in the continental United States, 81 percent of all restaurants used butter while 52 percent used margarine (some, of course, used both). Only fragmentary data are available on non household use in restaurants, hotels, hospitals, or other institutions-- of butter and margarine. However, these data on household purchases indicated, for example, that in the year ending March 1955, nonhousehold use of butter declined while nonhousehold use of margarine increased over the preceding year. This was determined by assuming that the residuals between total domestic disappearance of these products, as estimated by the Department, and household purchases was accounted for in nonhousehold uses.

Some of the trends and other information obtained from this survey on household purchases are summarized in the attached table entitled "Changes in Household Purchases of Specified Dairy Products and Margarine". From the outlook standpoint, attention in coming months should be directed towards purchase volumes for butter and margarine, because in the late fall and early winter of last year, householders reported large spurts in their purchase rates for these products.

1/ Prepared for the National Outlook Conference, Dairy Session, November 30, 1955, by the Market Development Branch, Agricultural Marketing Service, United States Department of Agriculture.

2/ For copies of these reports, "Household Purchases of Butter, Cheese, Nonfat Dry Milk Solids, and Margarine," write to Marketing Information Division, AMS, USDA, Washington 25, D. C.

CHANGES IN HOUSEHOLD PURCHASES OF SPECIFIED DAIRY PRODUCTS AND MARGARINE

Items	Marketing year ending March 31, 1955	6 months ending September 30, 1955	Remarks
Butter	Purchases 13 percent above previous year Prices about 10 percent lower	Purchases 6 percent above same period of 1954 Prices fractionally higher	7 percent more families were buying butter in September 1955 than in September, 1954
Margarine	Purchases 3 percent above a year earlier Prices unchanged	Purchases 8 percent above same period in 1954 Prices slightly lower	No change in percentage of families buying September, 1955 compared with September, 1954; however, average size of purchase was higher
Cheese Natural		Purchases 8 percent above same period in 1954	Purchases of all types -- American, Swiss, cream, and "other" varieties -- above a year ago
Processed		Purchases 17 percent below same period in 1954	Foods down sharply, spreads up slightly, other processed cheese down somewhat.
Cottage Cheese		Purchases about the same as in April - September, 1954 Prices very stable	Purchase rate very high on Pacific Coast
Nonfat dry milk solids		Purchases 25 percent above same period in 1954 Prices higher than a year earlier.	Gain in home use has been mainly due to more families buying. There were 25 percent more families buying NFDMS in July-Sept. 1955 than in the same period a year earlier.

It is interesting to note that the substantial increase in household purchases of nonfat dry milk solids was associated with the introduction of the new "instant" product. The large drop in purchases of processed cheese foods was associated with certain changes in merchandising by the cheese industry.

Geographical Differences

Quarterly data from this continuing survey show that the best household market for butter is in the Northeastern and North Central States. For margarine, Pacific Coast States householders are the largest per capita users; however, regional differences in reported per capita purchase reates for margarine are much less marked than those for butter. Only in the North Central States does the household per capita rate for butter exceed the comparable per capita purchase rate for margarine. This may be accounted for in part by the fact that two States in this region, Minnesota and Wisconsin, still prohibit the sale of colored margarine.

By regions, household purchases of butter per capita during July-September 1955, compared with a year earlier, showed the greatest gain in the Mountain-Southwestern area, while Southern householders reported the only decline in butter purchases from the July-September 1954 level. Per capita rates for butter in Southern and Mountain-Southwestern households approximate about 30 and 40 percent, respectively, of the United States average rate. The data for July-September 1955 also revealed that the per capita gain in household purchases from a year earlier in the populous Northeastern area--an important butter market--was below the gain for the nation as a whole.

For margarine, householders in the Northeast and North Central region reported little change during July-September 1955 from a year earlier in per capita purchases, while householders in the Southern States reported the largest gain.

Influence of Family Characteristics

This survey of household purchases of certain dairy products and margarine has also yielded some relations between purchases and family characteristics. For example, high-income families tend to eat more butter while low-income families use more margarine. For butter and margarine use combined, the differences by income groups were not noticeable.

Families with housewives 45 years old and over were not only the largest per capita users of butter, but they also used more margarine than families with younger housewives. It should also be noted that from April-September 1947 to April-September 1954, only those households with the older housewives increased their combined per capita use of butter and margarine.

Households headed by farmers were relatively low percapita buyers of butter compared with other families. Of course, many farm families use home-produced butter. Margarine use in families headed by farmers was low relative to other families in all periods surveyed, but showed a sharp increase from 1947 to 1953 and 1954.

Although large changes did occur from 1947 to 1953 and 1954 in household use of butter and margarine, the pattern for each commodity in terms of family characteristics generally tended to be the same in all three periods. Data to be obtained for April-September 1955 on the same basis will indicate where shifts have occurred over the last year.

V. REFERENCE MATERIALS

Publications available from the Marketing Information Division, Agricultural Marketing Service, United States Department of Agriculture:

The Dairy Situation, published monthly, is designed to provide current information pertaining to the dairy industry. For a quick grasp of the overall situation read "the dairy situation at a glance" which always appears inside the front cover, and the "summary" which precedes the main report.

Dairy Production, published monthly, includes production and related information, together with selected special summaries for those interested primarily in dairy statistics.

Fluid Milk and Cream Report, published monthly.

Evaporated, Condensed, and Dry Milk Report, published monthly.

Production of Manufactured Dairy Products, published annually, usually in November with statistics of the previous year.

Milk Production on Farms and Statistics of Dairy Plant Products, published annually, usually in February.

Farm Production, Disposition and Income From Milk, published annually, usually in April.

Dairy Statistics and Related Series, published about every two years. The last one was dated October 1953 and a new one is expected to be available early in 1956.

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"Milk and its products ... facts for consumer education." AIB 125.
A source book designed primarily for consumer information programs, including information on nutritive value, selection and home care, definitions, grades, and standards and consumption of milk and dairy products. Price 25 cents from the Superintendent of Documents, Government Printing Office.

"Do you get enough milk?" Home and Garden Bulletin 47.
A statement, for more general distribution, presenting some of the material included in AIB 125 in more popular form. Free from the Office of Information, U. S. Department of Agriculture.

County data from The Census of Agriculture for 1955, is becoming available and includes such information as:

Number of farms	1949 and 1954
Number of farms with milking machines	1949 and 1954
Number of farms with milk cows	1949 and 1954
Number of farms reporting whole milk sold, and quantities.	
Number of farms reporting cream sold, and quantities.	

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UNITED STATES DEPARTMENT OF AGRICULTURE
Foreign Agricultural Service
Washington 25, D.C.

November 15, 1955

EXPANDING FOREIGN MARKETS

For

FRUITS AND VEGETABLES

Program Objectives

1. To obtain access to foreign markets on an equal basis with foreign competitors for United States fruit and fruit products.

2. To assist the United States fruit industry to develop and maintain improved foreign markets for fruit and fruit products.

Significance of Export Outlet to the United States Fruit Industry

Exports of United States fruits and fruit products have provided a substantial outlet for the United States fruit industry for many years. Prior to the war, almost 14 percent of all sales of United States fruit and fruit products were made to foreign markets. In that period, almost 9 percent of the sales of fresh fruit was shipped to export outlets, whereas over 23 percent of the total sales of processed fruit went for export. During the last 3 years, only about 8 percent of the sales of both fresh fruit and processed fruit products were made to export outlets.

The export market for citrus fruit grown in the United States has increased along with the domestic market. Exports of fresh citrus fruit to Canada, which is our largest customer, and to Europe now are larger than before the war. Percentagewise, about the same share of total sales - 9 percent - is made in export markets as before the war. In fact, the percentage of fresh fruit sales made to export outlets has increased since the prewar period, while the percentage of processed citrus sales made in export channels is about half of its prewar level.

Exports of fresh and processed United States deciduous fruits, however, have been reduced sharply since before the war. Prior to the war, over 8 percent of all fresh deciduous fruit sales and over 25 percent of all processed deciduous fruit sales went to export markets. At the present time, only about

Prepared for the Fruit and Vegetable Commodity Sessions of the 33rd Annual Agricultural Outlook Conference, November 28-December 1, 1955.

3 or 4 percent of the fresh deciduous fruit, and about 12 percent of the processed deciduous fruit are exported. Formerly, about 17 percent of all United States canned fruit sales went to export markets, whereas recently about 3 or 4 percent have been sold in these markets. Dried fruits have fared a little better, recently exporting about 1/5 of their total sales, as compared to 1/3 of the total dried fruit sales being exported prior to the war.

United States Share of World Fruit Production

The United States is the world's most important fruit producer. Between 1/5 and 1/6 of the total production of fruit in the world is grown in the United States.

Nearly 1/2 of the world citrus fruit production is located in the United States. Over 1/3 of the oranges, about 1/2 of the lemons, and over 9/10 of the grapefruit grown in the world, are grown in the United States. The Mediterranean area, which produces almost as many oranges and lemons as this country, provides our greatest competition. Production of oranges in foreign countries is expanding about as rapidly as in the United States.

The production of deciduous fruit has been decreasing slightly in the United States since the prewar period, whereas the total world production of deciduous fruit is about 1/5 larger now than it was prior to the war. There have been sharp increases in production of apples and pears in the Northern European countries and of soft fruits as well in the Mediterranean countries, since the prewar period. Production of apples and pears in Europe as a whole, for example, currently is about twice the prewar average. There have been important increases also in the production of apples and pears in South America and the Union of South Africa. Before the war, United States deciduous fruit production accounted for 1/3 of the world total, whereas the United States share has dropped to 1/4 of the total in recent years.

Production of canned fruits in Australia and South Africa has been increasing rapidly since the war. These increases, plus small increases in production in European countries, have offset the sharp decline in Malayan pineapple production since the prewar days. United States canned fruit production provides slightly more than 3/4 of the world total.

Almost 1/2 of the world total of dried fruit production is produced in the United States. Important foreign competition is provided by the Mediterranean areas, Greece, Yugoslavia, Turkey, and Persia, and by Australia and South Africa. The United States produces about 1/3 of world raisins, and about 4/5 of the total world prune production.

Information relating to the United States share of world production and trade for the major fruit categories is provided in Tables I and II.

Table I

United States Share of World Production,
Average 1934-38, annual 1951-54

Crop season	Citrus and deciduous fruit	Citrus fruit	Deciduous fruit 1/	Canned fruit 2/	Dried fruit 3/
	- - Percent - -				
Average 1934-38	35	40	33	78	48
1951...	36	46	32	78	47
1952...	29	43	24	76	48
1953...	31	45	24	76	40
1954...	31	45	24	72	39

1/ Excluding grapes crushed for wine.
2/ Excluding citrus.
3/ Excluding dates and figs.

Table II

United States Share of World Trade,
Average 1934-38, Annual 1951-54

Crop season	Citrus fruit	Deciduous fruit	Canned fruit 1/	Dried fruit 2/
	- - Percent - -			
Average 1934-38	12	27	44	36
1951...	17	12	15	22
1952...	16	9	22	32
1953...	17	8	18	25
1954...	17	10	23	22

1/ Excluding citrus.
2/ Excluding dates and figs.

Destination of Exports

Europe and Canada have provided the principal outlets for exports of United States fruit and fruit products. Information relating to the share of the total sales of principal United States fruit and fruit products made to these respective markets is provided in Table III.

Table III

Share of Major United States Fruit Groups Exported,
by Principal Destinations,
Average 1934-38, Annual 1951-54

Fruit groups and crop season	Exports			
	Total	Europe	Canada	Other
	- - Percent of total sales - -			
Fresh				
Apples, grapes, pears, plums, and prunes:				
Average 1934-38	10.9	8.5	1.0	1.4
1951	6.0	1.7	2.0	2.3
1952	4.3	.1	2.4	1.8
1953	4.4	.3	2.6	1.5
1954	5.1	.7	3.0	1.4
Citrus:				
Average 1934-38	8.2	3.2	4.5	0.5
1951	10.7	2.7	7.1	.9
1952	12.3	4.1	7.3	.9
1953	12.4	4.1	7.6	.7
1954	12.4	4.4	7.2	.8
	- - Percent of total pack - -			
Canned fruit 1/				
Average 1934-38	17.2	16.3	0.1	0.8
1951	2.7	.6	1.0	1.1
1952	3.5	.7	1.5	1.3
1953	4.2	1.7	1.4	1.1
1954	4.4	1.5	1.5	1.2
Dried				
Apples, apricots, figs, peaches, pears, prunes, and raisins:				
Average 1934-38	36.1	30.1	2.7	3.3
1951	30.1	22.1	4.1	3.8
1952	33.3	25.3	4.0	4.0
1953	26.2	18.8	4.3	3.1
1954	22.8	14.4	4.8	3.6

1/ Deciduous only.

Barriers to Trade

In recent years, exports of most United States fruits and fruit products to European markets have been well below their prewar levels. Exceptions to this

are found in the case of raisins and oranges, but imports of most other United States fruits and fruit products have been either prohibited or sharply limited by European and other foreign countries since the war.

Following the war, practically all European countries imposed rigorous controls on imports of goods from the dollar area in order to preserve their dollar balances. In the immediate postwar years, only the most essential goods were permitted to be imported from the dollar area. Generally speaking, fruits and fruit products were considered to be luxuries and were low in the scheme of priorities established for imports.

As European economies have improved, there has been some liberalization of imports of fruits and fruit items from the United States. Recent steps toward liberalization of fruit items, and the current limitations affecting imports of United States fruits into European countries is summarized in the following schedule:

Liberalization Moves in 1955

Austria.--Effective July 17, Austria increased its liberalized import list. Fruit products in this list of interest to the United States include fresh lemons, canned pineapples, guavas, grapefruit and peaches; canned pineapple and grapefruit juices; other canned fruit and berry juices, unconcentrated and unsweetened; and canned olives.

Denmark.--Raisins were placed on the import free list in Denmark effective November 1. This is the only dollar fruit item now liberalized.

Germany.--On July 1, Germany liberalized imports of canned grapefruit and plums in barrels, without sugar. Free dollar quotas were established for imports of dried fruits and nuts, and canned pineapple for the last quarter of 1955. Further liberalization has been promised for early 1956, especially for canned asparagus, and citrus fruits and juices.

New Zealand.--Effective in February, New Zealand removed her import restrictions on dried prunes and fruit pulps.

Status of Other European Countries

Benelux.--Fresh fruits, canned fruit juices, and dried fruits are licensed--other fruit and tree-nut items liberalized.

Finland.--United States goods are under strict import controls.

France.--All dollar imports under license.

Ireland.--All dollar imports subject to license.

Norway.--Strict control of dollar imports.

Sweden.--Most products are liberalized, although some items, principally fresh fruits, must be purchased with transit dollars. Seasonal prohibitions also in effect for fresh apples and pears.

Switzerland.--Largely liberalized.

United Kingdom.--Dollar fruits and fruit products under import license control.

The United Kingdom, which in prewar times was the most important European customer for United States fruits, has taken increased quantities of fruit items in the past two or three seasons. Most of these exports, however, were financed under aid programs.

Problems relating to barriers to trade, such as tariffs, quotas, import license, exchange restrictions and others, are considered and discussed at an international forum referred to as the GATT, which is of special interest to the United States fruit industry.

GATT

United States Government representatives will talk to other government representatives in Geneva during November about import restrictions which foreign governments are imposing upon United States exports, and will press for relaxation of these restrictions. These discussions will take place at the 10th Session of the General Agreement on Tariffs and Trade, commonly known as the GATT. This agreement was made effective in 1948, and is currently signed by 32 countries. The GATT essentially is an agreement to reduce import duties and to prevent impairment of world trade by quotas, subsidies, or other devices.

The GATT provides a set of rules of conduct in international trade to which the member countries subscribe. It also provides some conditions under which these rules need not be lived up to by the member countries.

For example, one of the rules is that no member country may discriminate against imports from another member country. The exception is that when member countries have difficulties in maintaining dollar balances, they may discriminate against imports from the dollar area in order to preserve their dollar balances. European countries have discriminated against imports of dollar fruits since the war, and in so doing they have protected the fruit-producing industries of their countries, which have increased their production substantially in the last several years. Similarly, the same conditions have held for production in colonies of European countries.

At some of the discussions at the GATT session in Geneva this past winter, it was apparent that these fruit-producing industries in foreign countries intended to insist upon continuation of these conditions. It was quite apparent that the member countries were unwilling to allow world supply conditions to have an immediate and substantial effect upon domestic prices. The delegates were anticipating improved dollar balances and freer trade with the dollar area in the future. It was evident that quantitative restrictions for balance-of-payment reasons could not be continued much longer and foreign countries were looking for such measures without the balance-of-payment rationalization. Member countries obtained waivers exempting them from being bound by certain provisions of the GATT in order to prevent domestic or colonial industries from being sharply hurt by increased imports from the dollar area. These will be of considerable importance to the fruit industry.

These waivers have some aspects which are favorable from our point of view. First of all, the problem which we have long insisted to be the real issue is recognized. Furthermore, any country in order to obtain a waiver, must apply for it and in its application present a program designed to reduce gradually the protection provided. Thus, some limits are placed upon the use of these waivers which may be of help in reducing the amount of protection currently enjoyed by our foreign competitors.

The Agricultural Trade Development and Assistance Act of 1954

This Act (Public Law 480, 83rd Congress) provides a means whereby some of the surplus agricultural commodities produced in this country may be exported to other countries which currently are unable to pay for them with dollars. Programs developed under Public Law 480 involve agreements providing for the importation of surplus agricultural commodities and for the expenditure of the foreign currency received by the United States in exchange for the surplus agricultural commodities.

Thus far, there have been no fruits or fruit products included in programs developed under Public Law 480. Fruit items have been mentioned in the course of negotiations with some countries, and some limited quantities of fruits may be exported under such programs during the 1955-56 crop season.

Section 402 of the Mutual Security Act of 1954

The program under which most United States fruit items have been imported into the United Kingdom is that administered by the ICA. In 1953-54, importation of $10 million worth of surplus United States fruits and fruit products was authorized under Section 550 of the Mutual Security Act of 1953. A similar program authorized under Section 402 of the Mutual Security Act of 1954 provided funds for the importation of about $15 million worth of surplus United States fruits and fruit products. Currently, some $20 million has been set aside for the importation of fresh and processed United States fruit items into the United Kingdom. These programs provide for defense expenditures by foreign countries and include the proviso that part of the funds should be furnished in terms of surplus agricultural commodities rather than dollars.

Tree Nuts

The United States produces between 1/4 and 1/5 of the world's commercial production of edible tree nuts 1/. The United States is the sole commercial producer of pecans in the world. Over 3/5 of the world's walnuts are grown in the United States, the balance being produced principally by France and Italy, and to a lesser extent by Turkey and Yugoslavia. About 15 percent of the almonds are grown in the United States, with the balance produced in the Mediterranean area, chiefly Italy and Spain. Less than 10 percent of the world filbert output is produced in this country; Turkey is the main producer; Italy and Spain and the United States contribute the remainder. Cashew nuts from India and Mozambique, Brazil nuts (from Brazil), and pistachios from the Mediterranean, contribute the balance of the world's tree-nut supplies. In normal years, imports of tree nuts into the United States average between 75 and 80 percent of the total United States tree-nut production.

1/ Only almonds, Brazil nuts, cashews, filberts, pecans, pistachios and walnuts are considered here.

Section 22 Activities

Section 22 of the Agricultural Marketing Agreement Act of 1937, as amended, provides a means for limiting imports of agricultural commodities if they offset regulations established under programs of the Department.

For example, it would be difficult if not impossible, to improve returns to walnut producers by limiting sales of domestic walnuts if unrestricted imports offset the reduction in domestic supplies as a result of the program.

Since the 1951 season, there have been limitations upon the imports of almonds or imports of almonds and filberts each season. These limitations have usually been established in the form of a quota fee, i.e., a fee has been imposed upon all imports above an established quantity.

At the present time, there are no quota fees for these items. Marketing conditions in prospect for the 1955-56 year are such that no recommendations for such action have been made by the Department.

Export Outlets for Vegetables

A very large portion of all fresh vegetable exports are to Canada. The next most important customer is Cuba. There are no dollar or exchange problems with these countries. A very small volume of fresh vegetables are shipped to Venezuela, Mexico, and the Central American countries. Exports of fresh and frozen vegetables have shown substantial increases in recent years. Further increases can be expected, if prosperity and population increases in Canada continue.

Exports of canned vegetables are relatively insignificant when compared to the total pack. The principal export items are tomato juice, tomato paste and puree, asparagus and peas, listed in the order of importance. Canned vegetables are exported to a large number of countries. The same problems on import controls and restrictions that European countries apply to processed fruits also apply to processed vegetables.

Vegetable Imports

Most of the imported fresh vegetables, except potatoes, originate in Mexico and Cuba during the winter months. Fresh tomatoes from Mexico are usually the largest in volume, followed by rutabagas from Canada, peppers from Mexico, and cucumbers from Cuba. Onions from Chile and Egypt may become important in seasons when United States prices are unusually high. Potato trade, mostly between the United States and Canada, generally balances out at 2.5 to 3 million bushels annually. However, during short crop years in either country, imports to the country with the smaller crop may reach 5 million bushels.

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Tobacco Session

33RD ANNUAL AGRICULTURAL

OUTLOOK CONFERENCE

November 28-December 1, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE

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THE OUTLOOK FOR TOBACCO FOR 1956

About three-fourths of a million growers in this country, together with their families, depend on tobacco for a substantial part of their cash income. Cash receipts to growers from tobacco have totaled about 1.1 to 1.2 billion dollars a year for the last several years and will again be within this range this year. Surpluses have developed and cutbacks in acreage allotments and production will mean lower income to many producers of tobacco in 1956 than would be possible if recent levels of production were marketed with the support program.

The many different types of tobacco grown in this country have multiple uses and outlets, both domestic and foreign, and the demand prospects tend to vary somewhat. Roughly three-fourths of the total volume of the combined domestic types (proportions vary by types) is used by United States manufacturers of cigarettes, cigars, smoking tobacco, chewing tobacco, and snuff. The remaining one-fourth (varying percentagewise by types) is exported to foreign countries to be used there in various tobacco products.

Cigarettes require by far the largest quantity of tobacco--utilizing flue-cured, burley, Maryland, and also imported oriental types. Cigarette output in the United States is expected to total approximately 415 billion this year--about 3 percent higher than in 1954 but still nearly 5 percent below the peak 1952 figure. Cigarette consumption is expected to make further gains in 1956. The prospective continued high levels of economic activity and consumer incomes are favorable factors. However, many consumers are having to pay higher prices for cigarettes. Of the 41 States taxing cigarettes, 12 increased the rate of tax during 1955. Manufacturers increased prices of most leading king size brands in April 1955. Also, smokers switching to filter tip cigarettes from the nonfilter tips pay more per pack. Filter tip cigarettes are indicated in various unofficial sources to have increased significantly above last year and to be about one-fifth of total output. Present law provides for a reduction in the Federal tax rate on cigarettes as of April 1, 1956. Assuming the reduction goes into effect and is reflected in retail prices, cigarette purchasers would pay 1 cent less per pack following that date. However, based on past experience, changes in aggregate cigarette consumption in response to changes in income and prices have tended to be fairly small.

Only slight gains in cigarette consumption are resulting from population increases because of the age structure. The number of people aged 18 through 54 is increasing annually by only about one-half of 1 percent. The number in the 15 to 17 year and the 55 years and over age brackets is increasing about 2 percent annually but the proportions of smokers and rates of smoking are lower in these age groups.

Cigar manufacture utilizes domestic wrapper, binder, continental and Puerto Rican filler, and also imported cigar tobacco. Total cigar consumption in 1955 is expected to be 6.1 billion--about 1 1/2 percent above 1954 and probably the largest since 1930. With the expected continuation of favorable levels of consumer income in 1956, cigar consumption should continue above the 6-billion level in the year ahead. Manufacturers' prices of cigars have been comparatively stable for several years.

Prepared by Agricultural Economics Division, AMS, USDA.

The 1955 output of smoking tobacco--a secondary outlet of some significance particularly for burley--is estimated at about 84 million pounds or about one-half million more than in 1954. This contrasts with the downtrend averaging 5 1/2 percent annually from 1950 to 1954. The 1956 output of smoking tobacco seems likely to remain near the 1955 level. With consumer incomes remaining at favorable levels, there is little likelihood that any sizable number of smokers will shift to smoking tobacco for pipes and "roll your own" cigarettes.

The 1955 output of chewing tobacco--utilizing dark air-cured, burley, and cigar tobacco--is estimated at 79 1/2 million pounds or abot 2 million below 1954 and the smallest this century. Since 1950, the average annual rates of decline for plug and scrap (90 percent of the total) have been about 2 1/2 and about 1 1/2 percent, respectively. A gradual decline is likely to continue.

The 1955 output of snuff--utilizing mainly fire-cured tobacco--is expected to be near 39 million pounds, about one-helf million more than in 1954. Approximately the same volume is likely in 1956. Output of snuff in the past 10 years has been rather stable although with some easing from the postwar high reached in 1949 to the low of 1954. Manufacturers advanced snuff prices about 2 percent last August--the first change in the last few years.

Total exports of unmanufactured tobacco during the 1955-56 marketing year are expected to be around 15 percent above the 514 million pounds (farm-sales weight) in 1954-55. The major increase in 1955-56 tobacco exports will be flue-cured, which generally accounts for over four-fifths of the total shipped from the United States. The major factor contributing to the increase is the program providing for acceptance of foreign currencies for surplus sales under certain conditions. Also, the level of exports is being favored by the high levels of economic activity in important importing nations and the improvement during the past year in foreign gold and dollar assets for several countries. Although gold and dollar reserves of the United Kingdom declined during the past year, they are expected to strengthen in the period ahead. Even though 1955-56 exports will be significantly above 1954-55, the uptrend in the production of tobacco in foreign countries is expected to continue and to offer strong competition to United States tobacco seeking overseas markets.

The 1955-56 disappearances of the two principal cigarette tobaccos--flue-cured and the burley--are expected to be large and for most other kinds, should be almost the same as in 1954-55. However, supplies of most kinds of tobacco are very large in relation to prospective disappearances.

The 1955-56 total supply of flue-cured is exceedingly large due to a record carryover--7 percent above last year--and a record crop--15 percent above last year. Indicated yields per acre for 1955 average about one-sixth greater than the previous record high in 1950. The flue-cured carryover in mid-1956, reflecting the excess of this year's crop over probable disappearance, will rise to a new peak--about 10 percent above the mid-1955 carryover. The Department announced a 12-percent cut in the 1956 allotments on July 1. Since then the huge size of the current crop became apparent and leaders from the flue-cured area have indicated they believe a further cut is needed in next year's allotment. This would require

legislative action by Congress. Flue-cured auction marketings are nearing completion and auction prices for the season through mid-November averaged about 52 cents per pound--nearly the same as a year earlier. The 1955 crop support level is 48.3 cents per pound and placements under Government loan were heavy--about one-fifth of total marketings.

The 1955-56 total supply of burley is about the same as the record high level of a year ago. The increase in carryover approximately offsets the decrease in production this year compared with last. The 1955 burley allotments and acreage were cut nearly one-fourth below 1954 but indicated yields per acre this year average close to last year's record high. Burley growers will vote in December on whether to continue quotas on the next three crops. The announced 1956 burley acreage allotment is the 1955 allotment and with yields probably averaging under the highs of the last 2 years, 1956 burley production will be lower than in 1955. Burley auction markets opened on November 29. The support level at 46.2 cents per pound is one-fifth of a cent lower than in 1954. Last season, one-third of the big 1954 crop was placed under Government loan. The average price received by growers for the 1954 crop was 49.8 cents--5 percent less than in the preceding season.

The 1955-56 total supply of fire-cured tobacco is about 3 percent larger than for 1954-55. The 1955 crop is 4 percent larger than 1954 because of the record high yields per acre. The 1955 acreage allotments were cut 10 percent below 1954. Carryover increased relatively little. Growers of fire-cured tobacco voted last December to continue quotas in effect on their 1955, 1956, and 1957 crops. The announced 1956 allotment for fire-cured is the 1955 allotment. The 1955 price support level (computed at 75 percent of the burley support) is 34.6 cents per pound--one-fifth of a cent lower than last season. Government loan stocks of these types are relatively large. The marketings of Virginia fire-cured tobacco began on November 28 and for Kentucky-Tennessee types, usually during early January.

The 1955-56 total supply of dark air-cured and sun-cured tobacco is more than 4 percent larger than for 1955-56 and above any postwar year. The 1955 production of Kentucky-Tennessee dark air-cured is only slightly lower than last year even though there was a 10-percent cut in acreage allotments. Per acre yields are indicated to be at record or near record highs. The 1955 allotment of the relatively smaller Virginia sun-cured was about the same as 1954 and production of this type increased largely because of heavier yields. The combined carryover of these types rose about 7 percent above a year earlier. Growers of Kentucky-Tennessee dark air-cured tobacco voted last December to continue quotas in effect on their 1955, 1956, and 1957 crops. Growers of Virginia sun-cured will vote this December on whether to continue quotas on their next three crops. The announced 1956 allotment for Kentucky-Tennessee dark air-cured is the 1955 allotment while for sun-cured, allotments remain about the same. The 1955 price support level for these types (computed at 66 2/3 percent of the burley support) is 30.8 cents per pound--one-tenth of a cent lower than last season. Government loan stocks of dark air-cured tobacco are substantial. The marketings of these types (35 and 36) will begin on December 5 and 6.

The 1955-56 supply of Maryland tobacco is estimated to be approximately as large as last year. Although this year's crop suffered losses from storms and is indicated to be one-sixth smaller than in 1954, the increase in carryover offsets this. Marketing quotas have not been in effect on the 1954 and 1955 crops. Growers will vote in December on marketing quotas for the next three crops. If quotas are not approved by growers this year, no proclamation of quotas applicable to the 1957 and 1958 crops can be made unless the Secretary of Agriculture is petitioned by at least one-fourth of the producers to do so. Maryland growers received an average of 39 1/2 cents per pound for the 1954 crop auctioned this past spring and summer. This was about one-fourth less than in the previous season and the lowest since 1942.

The 1955-56 supply of the continental cigar filler is about 2 percent above 1954-55 due to the increase in carryover which more than offsets the decrease in this year's production. The supplies of Puerto Rican filler are significantly greater than a year ago due to increased stocks. Intended Puerto Rico acreage (to be harvested mostly in the first quarter of 1956) is about 8 percent lower than last season's harvested acreage.

The 1955-56 supply of the cigar binder types is about 3 1/2 percent smaller than for 1954-55. Storms and floods reduced the outturn of the Connecticut Valley types below that expected earlier and dry weather reduced the Northern Wisconsin crop. Also, the carryovers are lower than a year ago except for Connecticut Valley broadleaf. Growers of cigar binder are concerned as to the potential impact of the technological development known as manufactured "binder sheet." This can be made from whole leaves including stems and contains nontobacco materials as well. Also, there may be implications from the standpoint of the characteristics that are usually considered in connection with quality.

Marketing quotas on the 1954, 1955, and 1956 crops of the cigar binder and Ohio filler types were approved by growers in the fall of 1953. The announced 1956 allotment for these types is the 1955 allotment. In previous years, Pennsylvania growers of filler tobacco have consistently rejected a marketing quota. They will vote again in December on quotas applicable to the next three crops. If quotas are disapproved, no proclamation with respect to the 1957 and 1958 crops can be made unless the Secretary is petitioned by at least one-fourth of the growers to do so.

The cigar filler and binder types under marketing quotas receive price support at 90 percent of parity. The 1955 price support levels of the individual types vary only a fraction of a cent from last season's.

The 1955-56 supply of shade-grown cigar wrapper is about 4 percent smaller than for 1954-55. Storm and flood damage reduced the size of the Connecticut Valley crop and its production is estimated over 11 percent below last year. The Georgia-Florida shade-grown wrapper crop is only slightly below 1954. The carryover of shade-grown wrapper is close to that of a year earlier.

Acreage, Yield, Price per Pound, Farm Value, Production, Stocks, Supply, and Disappearance of Specified Types, 1945-55

FLUE-CURED TOBACCO, TYPES 11-14
(July-June Marketing Year)

Year	Acreage Harvested	Yield per Acre	Price per Pound	Farm Value	Production	Carryover Stocks	Total Supply	Disappearance Total	Exports	Other
	1,000 Acres	Pounds	Cents	Million Dollars	Million Pounds					
1945	1,078.7	1,088	43.6	511.5	1,173.5	1,126.3	2,299.8	1,152.4	485.1	667.3
1946	1,188.8	1,137	48.3	653.4	1,352.0	1,147.4	2,499.4	1,212.6	553.4	659.2
1947	1,161.2	1,135	41.2	542.8	1,317.5	1,286.8	2,604.3	1,054.1	359.3	694.8
1948	883.8	1,233	49.6	541.0	1,089.6	1,550.2	2,639.8	1,101.6	382.1	719.5
1949	935.4	1,191	47.2	525.5	1,114.5	1,538.2	2,652.7	1,168.2	438.9	729.3
1950	958.4	1,312	54.7	688.3	1,257.3	1,484.5	2,741.8	1,184.3	427.7	756.6
1951	1,110.1	1,309	52.4	760.9	1,452.7	1,557.5	3,010.2	1,279.4	502.2	777.2
1952	1,111.3	1,229	50.3	686.7	1,365.3	1,730.8	3,096.1	1,244.2	416.0	828.2
1953	1,021.8	1,245	52.8	671.7	1,272.2	1,851.9	3,124.1	1,209.0	431.2	777.8
1954	1,042.2	1,261	52.7	692.4	1,314.4	1,915.1	3,229.5	1,172.9	428.8	744.1
1955	994.3*	1,523*			1,514.0*	2,056.6	3,570.6*			

FIRE-CURED TOBACCO, TYPES 21-23
(October-September Marketing Year)

1945	61.3	951	31.5	18.4	58.3	131.8	190.1	85.0	47.6	37.4
1946	91.6	1,189	26.0	28.3	108.9	105.1	214.0	70.6	34.4	36.2
1947	83.8	1,031	29.5	25.5	86.4	143.4	229.8	67.2	30.3	36.9
1948	62.6	1,170	31.9	23.4	73.2	162.6	235.8	77.8	43.2	34.6
1949	60.7	1,189	29.8	21.5	72.2	158.0	230.2	65.3	28.7	36.6
1950	52.9	1,102	31.2	18.2	58.3	164.9	223.2	76.0	39.3	36.7
1951	49.0	1,215	40.0	23.8	59.5	147.2	206.7	59.8	27.6	32.2
1952	47.4	1,228	37.6	21.9	58.2	146.9	205.1	58.8	29.2	29.6
1953	48.3	1,013	33.8	16.5	48.9	146.3	195.2	61.2	28.3	32.9
1954	52.0	1,197	37.8	23.5	62.2	134.0	196.2	59.0	29.2	29.8
1955	48.0*	1,351*			64.8*	137.2	202.0*			

BURLEY TOBACCO, TYPE 31
(October-September Marketing Year)

1945	512.3	1,127	39.4	227.5	577.2	759.0	1,336.2	482.9	35.3	447.6
1946	489.0	1,256	39.7	243.6	614.0	853.3	1,467.3	526.5	49.9	476.6
1947	420.5	1,153	48.5	234.9	484.7	940.8	1,425.5	523.2	27.5	495.7
1948	432.0	1,396	46.0	277.4	602.9	902.3	1,505.2	530.9	41.9	489.0
1949	447.4	1,253	45.2	253.0	560.5	974.3	1,534.8	534.6	41.0	493.4
1950	408.3	1,222	49.0	244.5	499.0	1,000.2	1,499.2	517.9	30.0	487.9
1951	456.1	1,355	51.2	316.6	618.1	981.3	1,599.4	538.2	31.5	506.7
1952	463.5	1,403	50.3	327.0	650.1	1,061.2	1,711.3	547.9	28.9	519.0
1953	419.7	1,345	52.5	296.4	564.4	1,163.4	1,727.8	529.6	34.6	495.0
1954	420.9	1,585	49.8	332.5	667.2	1,198.2	1,865.4	517.5	32.4	485.1
1955	325.8*	1,590*			519.9*	1,347.8	1,865.7*			

*Estimated November, 1955.

Acreage, Yield, Price per Pound, Farm Value, Production, Stocks, Supply, and Disappearance of Specified Types, 1945-55

MARYLAND TOBACCO, TYPE 32
(October-September Marketing Year)

Year	Acreage Harvested	Yield per Acre	Price per Pound	Farm Value	Production	Carry-over Stocks	Total Supply	Disappearance		
								Total	Exports	Other
	1,000 Acres	Pounds	Cents	Million Dollars	Million Pounds					
1945	35.0	525	57.0	10.5	18.4	52.2	70.6	30.3	6.1	24.2
1946	50.0	925	44.5	20.6	46.2	40.3	86.5	34.0	5.7	28.3
1947	47.5	795	42.8	16.2	37.8	52.5	90.3	34.3	7.3	27.0
1948	46.6	750	54.4	19.0	35.0	56.0	91.0	37.0	9.3	27.7
1949	50.0	825	48.3	19.9	41.2	54.0	95.2	35.4	7.4	28.0
1950	50.0	800	48.2	19.3	40.0	59.8	99.8	35.5	8.4	27.1
1951	53.0	785	44.8	18.6	41.6	64.3	105.9	33.3	6.6	26.7
1952	50.0	805	48.8	19.6	40.2	72.6	112.8	40.2	7.8	32.4
1953	45.0	900	54.5	22.1	40.5	72.6	113.1	36.4	8.0	28.4
1954	50.0	850	39.5*	16.8*	42.5	76.7	119.2	35.1	8.0	27.1
1955	51.0*	700*			35.7*	84.1	119.8*			

DARK AIR-CURED TOBACCO, TYPES 35-37
(October-September Marketing Year)

1945	44.1	988	25.2	11.0	43.6	60.4	104.0	43.6	13.1	30.5
1946	40.8	1,215	22.5	11.2	49.6	60.4	110.0	37.3	7.6	29.7
1947	35.3	1,054	25.8	9.6	37.2	72.7	109.9	32.7	6.4	26.3
1948	29.9	1,165	28.7	10.0	34.8	77.2	112.0	37.5	14.8	22.7
1949	31.9	1,133	28.2	10.2	36.2	74.5	110.7	29.9	6.2	23.7
1950	28.7	998	24.6	7.0	28.6	80.8	109.4	36.4	10.3	26.1
1951	26.5	1,197	34.3	10.9	31.7	73.0	104.7	30.1	8.2	21.9
1952	26.3	1,286	31.6	10.7	33.8	74.6	108.4	29.3	6.1	23.2
1953	26.0	1,022	25.9	6.9	26.6	79.1	105.7	29.9	7.1	22.8
1954	26.1	1,325	34.1	11.8	34.6	75.8	110.4	29.5	10.1	19.4
1955	25.0*	1,376*			34.4*	80.9	115.3*			

CIGAR FILLER TOBACCO, TYPES 41-44
(October-September Marketing Year)

1945	36.0	1,261	34.0	15.4	45.4	142.9	188.3	59.5	3.4	56.1
1946	39.0	1,469	32.9	18.8	57.2	128.8	186.0	63.8	2.8	61.0
1947	42.7	1,419	30.6	18.5	60.6	122.2	182.8	59.1	1.5	57.6
1948	43.6	1,566	25.8	17.6	68.3	123.7	192.0	60.1	.7	59.4
1949	42.4	1,542	26.2	17.1	65.3	131.9	197.2	53.4	.7	52.7
1950	44.6	1,474	25.2	16.5	65.7	143.8	209.5	52.1	.6	51.5
1951	39.5	1,594	19.6	12.4	63.0	157.4	220.3	59.4	.7	58.7
1952	28.7	1,550	25.2	11.2	44.5	161.0	205.5	59.0	.4	58.6
1953	30.2	1,468	26.2	11.6	44.3	146.5	190.8	61.0	.2	60.8
1954	32.4	1,578	26.6	13.6	51.1	129.8	180.9	45.0	.1	44.9
1955	32.0	1,531			49.0	135.9	184.9			

*Estimated November, 1955.

Acreage, Yield, Price per Pound, Farm Value, Production, Stocks, Supply, and Disappearance of Specified Types, 1945-55

CIGAR BINDER TOBACCO, TYPES 51-55
(October-September Marketing Year)

Year	Acreage Harvested	Yield per Acre	Price per Pound	Farm Value	Production	Carry-over Stocks	Total Supply	Disappearance		
								Total	Exports	Other
	1,000 Acres	Pounds	Cents	Million Dollars	Million Pounds					
1945	41.8	1,518	48.0	30.5	63.5	102.3	165.8	62.3	3.4	58.9
1946	48.8	1,519	52.6	39.0	74.1	103.5	177.6	53.9	2.8	51.1
1947	46.4	1,495	43.8	30.3	69.4	123.7	193.1	67.3	4.3	63.0
1948	39.7	1,524	41.1	24.8	60.5	125.8	186.3	63.1	11.1	52.0
1949	39.5	1,561	36.0	22.2	61.7	123.2	184.9	49.8	3.4	46.4
1950	42.0	1,547	35.8	23.2	65.0	135.1	200.1	57.6	2.8	54.8
1951	31.7	1,572	38.1	19.0	49.8	142.5	192.3	57.5	2.9	54.6
1952	30.7	1,532	38.6	18.2	47.0	134.8	181.8	56.6	3.9	52.7
1953	29.3	1,617	44.7	21.2	47.4	125.2	172.6	52.8	2.1	50.7
1954	29.2	1,634	39.9	19.1	47.7	119.8	167.5	50.6	1.6	49.0
1955	31.2	1,430			44.6	116.9	161.5			

SHADE-GROWN TOBACCO, TYPES 61-62
(July-June Marketing Year)

1945	11.2	1,001	209.0	23.4	11.2	14.7	25.9	12.3		
1946	12.5	1,000	234.0	29.3	12.5	13.6	26.1	12.7		
1947	13.6	992	296.0	39.9	13.5	13.4	26.9	12.4		
1948	15.1	998	274.0	41.3	15.1	14.5	29.6	13.0	(2.5)	(10.5)
1949	15.6	1,108	201.0	34.8	17.3	16.6	33.9	14.5	3.7	10.8
1950	13.7	1,130	203.0	31.4	15.5	19.4	34.9	14.9	3.6	11.3
1951	13.6	1,098	194.0	28.9	14.9	20.0	34.9	13.7	3.6	10.1
1952	13.1	1,124	198.0	29.2	14.7	21.2	35.9	16.6	4.4	12.2
1953	12.3	1,203	202.0	29.9	14.8	19.3	34.1	15.9	3.7	12.2
1954	13.0	1,264	207.0	34.0	16.4	18.2	34.6	16.6	4.2	12.5
1955	12.9*	1,171*			15.1*	18.0	33.1*			

*Estimated November, 1955.

Production of Manufactured Tobacco Products, Cigars, and Cigarettes, and Removals of Cigarettes for Specified Periods

Period	Production						Cigarettes removed from factories	
	Plug twist and fine-cut	Scrap chewing	Smoking	Snuff	Large cigars	Cigarettes	Tax-paid[1]	Tax-free[2]
	Million pounds				Millions			
Calendar year								
1935-39 average	67.6	43.8	195.3	37.3	5,142	164,236	157,048	7,245
1940-44 average	65.3	47.9	176.2	40.7	5,558	256,917	223,542	33,312
1945....	70.4	47.7	168.5	43.8	5,374	332,165	267,202	64,999
1946....	61.3	46.1	106.4	39.4	5,747	350,038	321,727	30,670
1947....	56.3	42.2	104.7	39.2	5,612	369,683	335,413	34,277
1948....	54.2	42.1	107.6	40.8	5,788	386,826	348,509	38,691
1949....	50.2	39.6	108.1	40.9	5,603	384,962	351,809	33,223
1950....	48.4	39.0	107.7	40.0	5,558	391,956	360,198	31,816
1951....	47.3	39.1	101.3	39.5	5,774	418,802	379,725	38,913
1952....	46.7	38.2	96.8	38.8	6,026	435,547	394,107	40,019
1953....	45.6	38.1	86.6	39.1	6,122	423,070	386,825	37,010
1954....	44.9	36.6	83.7	38.5	6,028	401,855	368,624	33,203
1955[3]	43.5	36.0	84.0	39.0	6,061	415,000	383,000	32,000

1/ For domestic consumption.
2/ Commercial exports and shipments to the armed forces overseas.
3/ Estimated November, 1955.

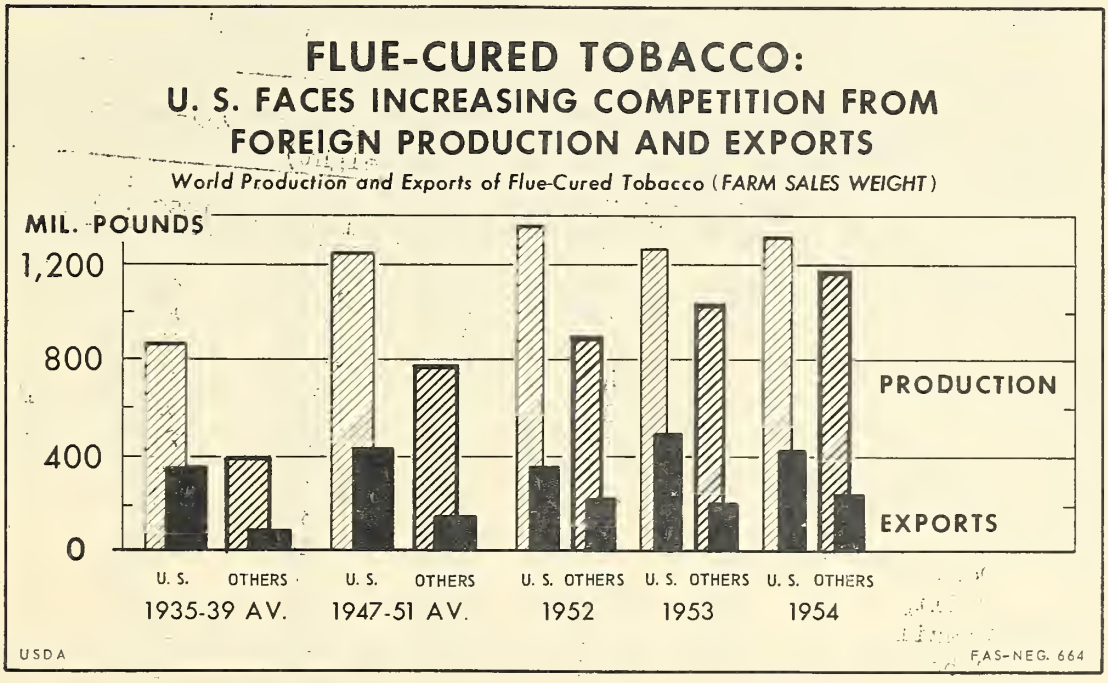
WORLD TOBACCO PRODUCTION AND TRADE WITH SPECIAL EMPHASIS ON FACTORS AFFECTING U. S. EXPORTS

Background

World tobacco production during this century has been stimulated by an increase in cigarette consumption. In most countries, cigarette consumption is still rising partly at the expense of other tobacco products. Consumers' preference for cigarettes, especially cigarettes containing a high percentage of light tobaccos, has resulted in a much more important position for such tobaccos in world production and trade.

In the immediate prewar period, production of flue-cured, Burley and oriental, the principal light types entering world trade, accounted for about one-third of the total world crop. During 1954, however, these same types amounted to more than 50 percent of world production.

Generally favorable prices for United States cigarette leaf during the postwar period have been influential in making the growing of tobacco more attractive in such countries as Southern Rhodesia, Canada and India. Other factors which have stimulated production of light tobaccos, including oriental leaf, in foreign countries are preferential tariffs, guaranteed purchase arrangements, bilateral trade agreements, state trading and strict control over allocations of dollars for tobacco purchases.



Prepared in the Tobacco Division, Foreign Agricultural Service, USDA

The changes in production are reflected in the pattern of international trade. Exporters of light cigarette tobaccos have expanded their markets, while cigar and dark tobaccos have become much less important than in prewar. This trend is reflected in the level of movement from the principal tobacco-exporting countries. Export trade of the United States, Southern Rhodesia, Canada, India, Turkey and Greece is larger than in prewar. World exports of cigar and dark leaf, included together, are less than in prewar.

Tobacco: Estimated world production harvested in calendar year 1954 with comparisons, by types - farm sales weight

Kinds	Average 1935-39	Average 1947-51	1953	1954	1935-39: Percent	1954: Percent
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent	Percent
Flue-cured	1,261,694	2,024,010	2,306,739	2,481,041	19.3	32.0
Burley (light air-cured)	338,752	608,960	639,945	659,150	5.2	8.5
Other light air-cured	121,074	128,504	136,018	128,463		
Light sun-cured	680,667	741,910	684,360	712,436		
Dark air-cured	3,105,681	2,616,930	2,563,569	2,664,918		
Dark sun-cured	185,654	246,669	217,151	233,929		
Fire-cured	162,489	151,958	110,251	116,782		
Oriental (Turkish) and Semi-Oriental	649,639	727,302	807,527	755,715	10.0	9.7
Total	6,513,933	7,257,971	7,465,560	7,752,484		

World exports of unmanufactured tobacco, average 1935-39; annual 1950-54
(Million pounds - export weight)

Country	Average 1935-39	1950	1951	1952	1953 1/	1954 1/
United States	421	478	522	396	519	454
Southern Rhodesia	19	89	67	90	81	100
India 2/	44	89	109	83	71	74
Canada	17	27	29	39	28	32
Greece	98	57	69	91	108	116
Turkey	76	111	127	126	158	139
Indonesia	100	28	28	28	32	43
Dominican Republic	14	32	35	34	21	27
Philippines	37	8	14	26	26	22
Brazil	71	81	66	67	53	62
Cuba	28	27	38	40	36	44
All others	229	173	200	158	168	180
Total	1,154	1,200	1,304	1,178	1,301	1,293
Percent U. S.	36.5	39.8	40.0	33.6	39.9	35.1

1/ Preliminary.
2/ Fiscal year beginning April 1 of year shown.

The changes in production are reflected in the pattern of international trade. Exporters of light cigarette tobaccos have expanded their markets, while cigar and dark tobaccos have become much less important than in prewar. This trend is reflected in the level of movement from the principal tobacco-exporting countries. Export trade of the United States, Southern Rhodesia, Canada, India, Turkey and Greece is larger than in prewar. World exports of cigar and dark leaf, included together, are less than in prewar.

Tobacco consumption throughout the world is generally larger than in prewar years, although extremely high levels of taxation, including tariffs, on tobacco and tobacco products have been retarding factors. Imports into many countries are also larger, although not in proportion to increases in consumption levels, because of stepped-up production in several of the major importing countries. The United States has been unable to regain its prewar position in cigarette leaf exports due to restrictive measures, such as those previously mentioned, erected against it. At the same time, the United States has held by far the largest supply of the types of tobacco in greatest demand. Substantial cuts in the acreage of United States tobaccos have been made in recent years, and further reductions are probable in view of the supply-disappearance ratio. Tobacco production abroad, however, is being increased in a number of countries that compete with us in world trade.

Current Outlook for U. S. Tobacco Exports

Tobacco exports during the fiscal year 1955-56 are expected to total about 530 million pounds (export weight) compared with 460 million for 1954-55. This would represent an increase of about 15 percent. Exports are expected to be the largest since the early postwar period.

Favorable factors that will affect exports include: (1) a much larger movement under the provisions of Public Law 480, which will include a substantial carry-over from the 1954-55 fiscal year programs; (2) relatively low stocks in relation to consumption in a number of foreign outlets; (3) a generally improved gold and dollar reserves position in importing countries; (4) a higher level of economic activity abroad; (5) increasing consumption of cigarettes containing high percentages of U. S. leaf; and (6) a record U. S. flue-cured crop, with prices slightly below those for the 1954 crop.

On the unfavorable side are continuing increases in foreign production, particularly oriental leaf, in the important exporting countries of Greece and Turkey. Flue-cured crops in Southern Rhodesia and India were about the same in 1955 and 1954. A severe frost in Canada, another major producer and exporter of flue-cured tobacco, sharply reduced the 1955 crop.

Public Law 480

Public Law 480 was enacted primarily for the purpose of encouraging export sales by accepting foreign currencies in payment for exports above normal dollar purchases. Not only is there a substantial supply of tobacco in the United States, but the inability of many countries to pay in dollars for their full tobacco requirements makes this program necessary, if increased amounts of leaf are to be moved abroad under present circumstances.

Quantity and dollars involved under the P. L. 480 program for tobacco -- fiscal year 1954-55

Country	Agreements Signed	
	Million Pounds	Million Dollars
France	.8	.65
Pakistan	3.6	3.0
United Kingdom	22.0	15.0
Japan	6.2	5.12
Spain 1/	4.6	2.3
Finland	3.8	2.2
Thailand	2.6	2.0
Italy	4.2	3.2
Austria	.9	.5
Korea	10.0	4.62
Israel	.25	.2
Total	58.95	38.79

1/ The original Spanish agreement included 9.0 million pounds of tobacco at 4.5 million dollars, but this was subsequently amended.

Due to difficulties in completing negotiations, only a little more than 5 million pounds (export weight) moved out under P. L. 480 during the 1954-55 fiscal year. The bulk of the tobacco provided for in the 1954-55 program has already been exported during the period July 1, 1955, to date, and this will be a most-important factor in raising the level of exports during 1955-56.

Prospects are favorable for agreements during fiscal 1955-56 covering quantities at least equal to those for 1954-55. A number of countries that did not sign an agreement during the past fiscal year have expressed a keen interest in having a program for this year.

Factors Affecting U. S. Tobacco Exports

During the postwar period, United States exports of light cigarette tobaccos have been at levels considerably above those of prewar. Conversely, total exports of dark leaf have been substantially below prewar. There appears to be no reason for expecting a reversal of this situation, since the world-wide consumption trend is towards tobacco products made from light types of leaf.

United States: Exports of unmanufactured tobacco by types, calendar years, averages 1935-39 and 1947-51- annual 1953 and 1954
(Export Weight)

Type	Average 1935-39	Average 1947-51	1953 1/	1954 1/
	million pounds	million pounds	million pounds	million pounds
Flue-cured	312.9	388.1	444.3	374.8
Burley	10.6	32.9	25.0	29.6
Ky.-Tenn. fire-cured	49.0	24.6	19.5	20.9
Va. fire-cured 2/	9.0	6.0	4.4	4.0
Maryland	5.4	7.3	8.1	8.7
Green River	3.0	1.7	1.8	2.1
One Sucker	1.0	3.1	1.0	.9
Black Fat, etc.	8.9	4.7	3.9	4.5
Cigar Leaf:				
Wrapper	-	-	3.9	3.4
Binder	-	-	3.1	1.7
Filler	-	-	.6	.2
Total Cigar Leaf	1.3	9.8	7.6	5.3
Perique	.1	.1	.1	.1
Trimmings, Stems & Scrap	19.6	8.1	3.0	2.7
Total	420.8	486.4	518.7	453.6

1/ Preliminary.
2/ Includes Virginia sun-cured.

Although United States leaf is preferred in many countries, various trade barriers erected by foreign countries have prevented the full realization of our export potential. At the same time, these barriers have encouraged the export and use of tobacco produced in other countries. Even with these handicaps, exports of our tobacco to most countries have been maintained at levels at least equal to prewar, and for some considerable increases are noted.

In the latter category such countries as Germany, the Netherlands, Australia, Switzerland and Denmark should be included. But a number of other countries in the Far East, including the Philippines, Indonesia, Japan and Thailand also have stepped-up purchases of United States tobaccos since the end of World War II.

Increases in exports to the countries mentioned, and to several others less important in the over-all picture, have more than offset a substantial decline in exports to the United Kingdom, and the elimination of Communist China as an outlet.

United States: Exports of unmanufactured tobacco by major markets, calendar years, averages 1935-39 and 1947-51; annual 1953 and 1954
(Export Weight)

Country of destination	Average 1935-39	Average 1947-51	1953 1/	1954 1/
	million pounds	million pounds	million pounds	million pounds
United Kingdom	200.4	177.8	179.7	150.0
France	20.6	9.0	4.7	12.6
Netherlands	17.8	33.4	38.1	38.1
Spain	2.8	1.5	3.7	3.3
Ireland	7.1	17.6	17.5	14.0
Belgium and Luxembourg	12.5	22.9	12.4	12.3
Denmark	4.9	11.1	11.8	9.6
Norway	5.6	7.9	7.4	7.6
Portugal	4.8	8.7	7.4	7.3
Switzerland	4.3	12.8	11.9	11.7
West Germany	10.6	49.2	70.5	43.4
Sweden	8.4	12.4	10.2	9.6
Japan	5.3	.4	9.5	6.7
Australia	19.9	20.3	26.7	28.2
India	2.9	7.5	1.2	1.3
Egypt	1.3	3.7	5.6	5.7
Mexico	.2	1.5	2.8	5.9
Philippine Republic	1.4	7.6	20.9	19.5
New Zealand	3.0	5.8	5.8	6.6
Indonesia	2.2	6.5	13.0	10.3
China	49.1	14.3	-	-
Others	35.7	54.5	57.9	49.9
Total	420.8	486.4	518.7	453.6

1/ Preliminary

Country Markets and Fiscal Policies Affecting Exports

In general, our foreign markets fall into three broad categories:

(1) Countries with private manufacturers who are free to purchase from any source;

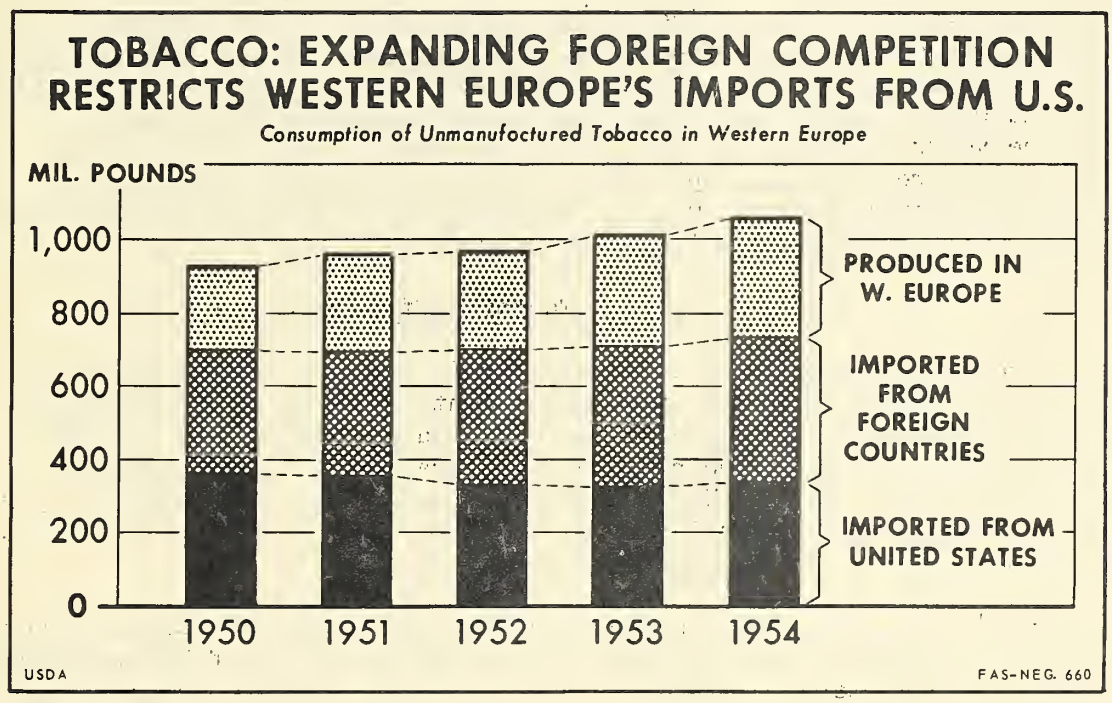
(2) The British Commonwealth; and

(3) Countries with monopoly control of the tobacco industry.

The United States supplies a high percentage of the leaf tobacco moving to the "free" markets, which include such countries as the Netherlands, Belgium, Denmark, Switzerland, Norway and Ireland. The outlook for substantially increasing our sales to this group of countries is not bright, since we already have an important position in their import trade, and per capita consumption is already relatively high.

The United States faces the disadvantage of preference tariffs in the British Commonwealth. As far as the British group of countries is concerned, the quality of our leaf should enable us to hold a substantial portion of the market; however, continued dollar shortages in the United Kingdom, our most-important foreign outlet, have been a limiting factor.

In the Monopoly countries, such as Italy, France and Spain, American tobacco has made a relatively poorer showing. The tendency on the part of Monopoly countries is to lean toward a low price tobacco resulting in the output of a strong cigarette, which affects consumption adversely. These countries in general subordinate the public desire for certain types of tobacco products to politico-economic considerations. Consequently, American tobacco exporters find it extremely difficult even to maintain sales in this group of markets.



The Price Factor in Export Sales

It is not easy to measure the ability of U. S. tobacco growers to compete "pricewise" in world markets. World market prices, such as those for cotton and wheat, based on grades and qualities that are internationally recognized and traded in, do not exist for tobacco.

There appears to be a rather clear-cut division of markets as far as the price factor is concerned. Certain countries, such as Australia, Ireland, Switzerland and Sweden, fall into the category of "quality" markets. Prices for United States leaf appear to have had little effect on the export movement to the "quality" markets. The cost of leaf tobacco is relatively unimportant when compared with the retail price of the products, and quality of the end product is the primary consideration. (Germany is fast becoming a "quality" market).

In "price" markets, such as Belgium and the Netherlands, manufacturers' margins are low, and price considerations are of primary importance. The quality of the "end product" is often a secondary consideration. Leaf from non-U. S. sources is substituted for American tobacco wherever possible. Even so, our share of the import trade in such important outlets as Belgium and the Netherlands is around 40 percent.

The extent to which prices, aside from other factors, have affected our tobacco export trade, cannot be accurately measured. However, regardless of the contributing factors, production in foreign countries has increased and U. S. growers will find themselves facing greater competition in the years ahead. Perhaps we should add that prices for U. S. leaf up to the present time appear to have had less influence upon exports than have other factors in world trade. Naturally, the price factor as related to exports varies widely from country to country.

Other Factors Affecting Exports

Several of these factors, such as preferential tariffs, special purchase arrangements, bilateral trade agreements, state trading and allocations of dollars for tobacco purchases, have already been mentioned. Others include quotas and import licensing, trade and payments agreements and mixing regulations. U. S. export trade in tobacco has been hampered severely by these barriers and devices that are used by many of our important markets to restrict tobacco purchases here.

The "dollar problem" has been used to justify the erection of these barriers. This problem appears to be one that must be solved if U. S. tobacco exports are to be materially increased over the long-term period. An improvement in international trading conditions in recent years already has permitted some relaxation of the trade barriers affecting U. S. leaf exports. With future lowering of tariffs, resulting in an increased flow of goods and services to the United States, economic conditions abroad are bound to improve. The justification for existing barriers under such conditions would to a large extent be no longer valid.

The level of taxation of tobacco products in foreign countries is another problem that confronts the tobacco exporter. With an improvement in living standards and income stemming from higher levels of economic activity, it is to be hoped that existing tax levels (including both tariff and excise), which severely limit consumption, will be reduced. (In many countries it requires from 30 minutes to an hour of work to earn enough money for a package of cigarettes.) It will require strenuous efforts on the part of those interested in expanding tobacco exports to convince foreign tax authorities that the point of diminishing returns, as regards government revenues, has been reached.

(A statistical appendix is attached containing detailed information on movement of tobacco from the principal exporting countries of the world).

STATISTICAL APPENDIX

United States: Exports of unmanufactured tobacco to principal importing countries, calendar years, averages 1935-39 and 1947-51; annual 1953-54

(Million pounds - Export weight)

Country of Destination	Average 1935-39	Average 1947-51	1953 1/	1954 1/
		FLUE-CURED		
Sweden	3.6	6.9	7.0	7.9
Norway	2.5	4.5	4.1	5.1
Denmark	2.5	7.6	9.9	7.9
United Kingdom	193.5	174.7	177.6	148.2
Ireland	6.1	16.9	16.9	13.7
Netherlands	9.5	23.7	29.8	29.9
Belgium-Luxemburg	3.7	15.5	7.5	7.5
Germany 2/	4.1	36.8	61.0	35.6
Thailand	3.2	3.3	6.6	4.6
Indonesia	2.0	6.4	12.5	9.7
Philippine Rep.	.7	6.9	19.6	18.5
China	33.9	9.7	0	0
Japan	4.8	.4	9.5	6.7
Australia	19.1	20.0	26.2	27.9
New Zealand	2.7	5.5	5.5	6.2
All others	21.0	49.3	50.6	45.4
Total	312.9	388.1	444.3	374.8
		BURLEY		
Mexico	.1	1.0	1.5	4.0
Sweden	.6	1.7	1.4	.3
Denmark	.8	1.6	.7	.5
Netherlands	1.0	2.9	.9	2.0
Belgium-Luxemburg	2.0	3.6	3.0	2.6
France	.2	1.7	.7	2.1
Germany 2/	.5	6.1	4.9	4.0
Portugal	2.5	4.7	3.0	4.5
Philippine Rep.	3/	.4	1.2	.9
Egypt	3/	.9	1.2	.7
All others	2.9	8.3	6.5	8.0
Total	10.6	32.9	25.0	29.6
		KENTUCKY-TENNESSEE FIRE-CURED		
Sweden	2.2	1.6	.7	.1
Denmark	1.1	.6	.6	.7
United Kingdom	2.7	1.2	.3	.4
Netherlands	4.8	4.0	5.4	4.5
Belgium-Luxemburg	4.4	2.2	.6	1.0
France	18.3	4.3	1.7	6.7
Germany 2/	3.0	1.0	.9	.5
Switzerland	2.3	2.6	1.8	1.8
Spain	2.6	.4	1.9	0
Italy	.4	1.4	.6	.4
All others	7.2	5.3	5.0	4.8
Total	49.0	24.6	19.5	20.9

United States: Exports of unmanufactured tobacco to principal importing countries, calendar years, averages 1935-39 and 1947-51; annual 1953-54

(Million pounds - Export weight)

Country of Destination	Average 1935-39	Average 1947-51	1953 1/	1954 1/
	- - - VIRGINIA FIRE-CURED 4/ - - -			
Sweden	.8	.7	.5	.6
Norway	2.0	1.8	1.9	1.5
United Kingdom	1.5	.4	.3	.2
Netherlands	.5	.6	.1	.4
Germany 2/	1.0	.3	.3	.2
Switzerland	.1	.5	.3	.3
Australia	.2	.1	.3	.2
New Zealand	.3	.3	.1	.2
All others	2.6	1.3	.6	.4
Total	9.0	6.0	4.4	4.0
	- - - - - BLACK FAT, ETC. - - - - -			
Fr. West Africa	2.7	.7	.5	.8
Gold Coast	1.3	1.1	1.0	1.0
Nigeria	2.7	2.0	2.1	2.5
West Port. Africa	.3	.2	.1	3/
All others	1.9	.7	.2	.2
Total	8.9	4.7	3.9	4.5
	- - - - - - MARYLAND - - - - - -			
Netherlands	1.8	.6	.4	.4
Belgium-Luxemburg	.4	.2	.3	.4
France	.7	.4	0	0
Germany 2/	.2	.3	.3	.5
Switzerland	1.6	4.8	5.5	5.8
Yugoslavia	0	0	.7	.6
Algeria and Tunisia	.3	.4	3/	.3
Others	.4	.6	.9	.7
Total	5.4	7.3	8.1	8.7
	- - - - - ONE SUCKER - - - - -			
Netherlands	3/	.3	.1	.1
Belgium-Luxemburg	.7	.3	.2	.2
France	0	.7	0	.3
Nigeria	3/	.8	.6	.2
Others	.3	1.0	.1	.1
Total	1.0	3.1	1.0	.9

United States: Exports of unmanufactured tobacco to principal importing countries, calendar years, averages 1935-39 and 1947-51; annual 1953-54

(Million pounds - Export weight)

Country of Destination	Average 1935-39	Average 1947-51	1953 1/	1954 1/
	----- GREEN RIVER -----			
United Kingdom	2.0	.5	1.0	1.0
Netherlands	3/	.2	.7	.2
Belgium-Luxemburg	.7	.2	3/	.1
France	3/	.2	0	.7
Others	.3	.6	.1	.1
Total	3.0	1.7	1.8	2.1
	----- CIGAR LEAF -----			
Canada	.1	.4	.6	.5
Denmark	0	.9	.3	.2
Netherlands	.1	.8	.5	.3
Belgium-Luxemburg	3/	.6	.9	.6
Germany 2/	.3	4.5	2.8	2.3
Austria	3/	.3	.2	.2
Switzerland	0	.2	3/	.3
Algeria and Tunisia	3/	.8	.1	3/
Others	.8	1.3	2.2	.9
Total	1.3	9.8	7.6	5.3
	----- PERIQUE -----			
Total 5/	.1	.1	.1	.1
	- TRIMMINGS, STEMS AND SCRAP -			
Sweden	1.1	1.1	.5	.5
Norway	.1	.1	.4	.2
Denmark	.2	.3	.2	.2
Germany 2/	1.3	.2	.3	.1
China	15.2	4.6	0	0
Tangier	0	.2	1.1	.1
Others	1.7	1.6	.5	1.6
Total	19.6	8.1	3.0	2.7

1/ Preliminary.
2/ All Germany, 1935-39; West Germany only for postwar years.
3/ Less than 50,000 pounds.
4/ Includes Virginia sun-cured.
5/ Largely United Kingdom.

Compiled in the Foreign Agricultural Service from Foreign Commerce and Navigation of the United States, and records of the Bureau of the Census.

Exports of unmanufactured tobacco from major exporting countries, by principal countries of destination, averages 1935-39 and 1947-51; annual 1953 and 1954

Exporting Country	Country of Destination	Average 1935-39	Average 1947-51	1953	1954
		Million pounds	Million pounds	Million pounds	Million pounds
Southern Rhodesia:	United Kingdom	15.3	44.5	52.9	61.6
	Australia	1/	4.9	8.1	11.2
	Nigeria	1/	1.3	.7	2.1
	Kenya	1/	.3	.3	1.0
	U. of So. Africa	2.5	3.5	1.5	.9
	Netherlands	.1	2.3	5.4	6.8
	Denmark	1/	3.0	1.3	4.4
	Germany	.1	.1	3.0	2.4
	Belgian Congo	1/	.6	1.1	2.1
	Sweden	1/	.6	1.2	1.4
	Belgium	.5	.3	1.0	1.1
	Egypt	1/	3.4	.8	1.1
	France	1/	1/	.1	.6
	Austria	1/	2/	.4	.6
	Norway	1/	.1	.2	.5
	United States	1/	.7	.1	0
	Others	.7	2.2	2.6	3.0
	Total	19.2	67.8	80.7	100.8
India 3/:	United Kingdom	20.0	35.1	30.1	31.1
	Aden & Dependencies	6.1	4.1	7.2	6.4
	Burma	6.3	.3	.3	.5
	Germany	2/	1.1	0	2/
	Sweden	1/	1.5	1.0	0
	Netherlands	.9	4.6	2.7	2.6
	Belgium	2/	3.6	2.6	1.7
	Japan	2.4	1.8	10.1	5.9
	Hong Kong	.4	5.2	2.8	3.2
	Ceylon	.3	.7	.8	.3
	Egypt	1/	2.0	1.8	2.2
	China	4.8	1.3	1.6	10.1
	Soviet Union	0	4.4	0	0
	Pakistan	0	13.5	.6	1.9
	Others	2.3	7.3	8.5	8.1
	Total	43.5	86.5	70.1	74.0
Canada:	United Kingdom	15.3	17.3	23.3	25.1
	Australia	1/	.4	1.7	2.3
	Trinidad	1/	.8	1.4	1.2
	Jamaica	1/	1.0	1.0	1.2
	Netherlands	1/	.4	.3	.6
	Belgium	1/	.9	2/	.1
	Germany	1/	0	0	.5
	Others	1.2	1.9	.8	1.0
	Total	16.5	22.7	28.5	32.0

See footnotes at end of table.

Exports of unmanufactured tobacco from major exporting countries, by principal countries of destination, averages 1935-39 and 1947-51; annual 1953 and 1954

Exporting Country	Country of Destination	Average 1935-39	Average 1947-51	1953	1954
		Million pounds	Million pounds	Million pounds	Million pounds
Greece:	West Germany	(48.0	9.3	34.8	37.6
	East Germany	(	-	4.1	6.4
	United States	19.7	11.0	13.3	14.4
	France	1.7	6.8	9.8	11.5
	Italy	2.3	4.7	3.5	9.0
	U. S. S. R.	2.6	1/	4.9	8.2
	Austria	2.2	4.0	6.8	7.1
	Finland	2.8	3.1	2.0	4.2
	Egypt	2.3	2.8	4.0	2.8
	United Kingdom	.7	3.6	3.8	2.5
	Sweden	2.5	1.3	2.0	1.0
	Netherlands	2.0	.5	.7	.3
	Switzerland	1/	1.1	2.2	1/
	Hungary	.7	1/	4.3	2.4
	Other	10.2	3.6	11.7	8.6
	Total	97.7	51.8	107.9	116.0
Turkey:	United States	23.1	51.3	72.1	64.9
	West Germany	(30.9	(17.5	22.3	12.1
	East Germany	(	(	2.3	12.2
	Poland	1.2	.7	1/	4.8
	Czechoslovakia	2.9	6.1	3.5	4.1
	Hungary	.4	.4	2.2	2.4
	Egypt	1.8	9.6	9.5	4.5
	Switzerland	.3	2.3	3.1	2.9
	United Kingdom	.8	7.1	10.3	10.8
	Austria	1.5	2.7	3.6	2.1
	Italy	3.6	2.0	6.8	1.5
	France	.7	6.3	4.4	5.0
	Belgium	1.6	3.4	5.7	3.0
	Netherlands	2.6	3.2	2.0	.5
	Finland	1.2	1.7	3.3	2.4
	Other	2.9	10.0	7.0	5.5
	Total	75.5	124.3	158.1	138.7
Indonesia:	Netherlands	91.9	15.1	27.6	41.2
	United States	0	.7	.6	.7
	Indochina	.2	.1	.6	.5
	Spain	4.1	0	0	0
	German Republic	2/	0	0	.3
	Japan	0	0	0	.2
	France	2.2	0	0	0
	Others	1.3	.5	3.1	.1
	Total	99.7	16.4	31.9	43.0

Exports of unmanufactured tobacco from major exporting countries, by principal countries of destination, averages 1935-39 and 1947-51; annual 1953 and 1954

Exporting Country	Country of Destination	Average 1935-39	Average 1947-51	1953	1954
		Million pounds	Million pounds	Million pounds	Million pounds
Dominican Republic:	Spain	.6	13.7	.1	4.4
	France	2.4	2.7	1.3	2.2
	Netherlands	4.5	5.9	2.4	1.7
	Belgium	1.2	4.4	3.2	4.8
	Germany	3.1	1.2	3.0	5.8
	Indochina	0	1.2	3.2	.7
	Algeria	.8	1.4	2.7	2.9
	Switzerland	1/	.3	.1	.1
	Canary Islands	.2	.5	.6	.5
	United States	1/	.2	2/	2/
	Others	.9	3.9	4.3	4.1
	Total	13.7	35.4	20.9	27.2
Philippines:	Spain	14.5	7.7	17.8	16.9
	United States & Terr.	6.4	.6	2.8	1.6
	China	.5	.2	0	0
	Indochina	.1	.7	1.6	1.1
	Belgium	.3	.4	1.8	.9
	French Africa	.8	.3	.4	.4
	Italy	2.6	2/	2/	.8
	Netherlands	4.4	2/	1.6	.4
	Japan	2.1	0	2/	0
	Korea	2.1	0	0	0
	France	1.0	0	.1	0
	Others	2.6	.1	.2	.3
	Total	37.4	10.0	26.3	22.4
Brazil:	United States	1/	.2	2.4	1.1
	Germany	30.4	8.4	11.6	16.0
	Denmark	1/	3.8	3.4	5.1
	Spain	1.9	12.5	6.6	10.5
	France	1.7	4.5	3.5	3.1
	Netherlands	18.2	10.2	7.1	6.4
	Switzerland	.3	4.8	2.5	4.4
	Sweden	.8	.5	1.1	.9
	Argentina	10.8	8.5	0	0
	Uruguay	2.4	2.9	5.0	4.5
	Algeria	2.0	1.7	2.4	1.9
	Belgium	1.4	3.3	2.2	2.0
	Indochina	1/	1.0	1.9	1.0
	Others	1.2	5.7	3.3	5.1
	Total	71.1	68.0	53.0	62.0

Exports of unmanufactured tobacco from major exporting countries, by principal countries of destination, averages 1935-39 and 1947-51; annual 1953 and 1954

Exporting Country	Country of Destination	Average 1935-39	Average 1947-51	1953	1954
		Million pounds	Million pounds	Million pounds	Million pounds
Cuba:	United States	13.9	17.7	25.4	25.5
	Germany	3.5	.4	1.4	1.6
	Netherlands	1.1	1.0	1.1	1.0
	Spain	5.2	4.6	2.4	7.3
	Argentina	1.0	1/	0	1/
	Others	3.0	5.7	5.9	8.4
	Total	27.7	29.4	36.2	43.8

1/ If any, included in others.
2/ Less than 50,000 pounds.
3/ Fiscal year beginning April 1 of the year shown.

COSTS AND RETURNS ON TOBACCO FARMS

Costs of production on tobacco farms have gone up over the years. From 1937-41 to 1947-49 the change in cost per unit of production was about as great on tobacco farms as on cotton, dairy, and Corn Belt farms (table 1). Since 1947-49, costs on tobacco farms have risen less than on cotton farms, but more than on dairy farms and about the same as on Corn Belt farms.

Inputs (or costs at constant prices) per unit of production have been reduced over the years because of technological improvements on farms. Although year-to-year changes in crop yields have a direct effect on annual variations in inputs per unit of production, the longer time trend is an important indication of changes in efficiency of production. Since 1947-49 inputs per unit of production have been reduced slightly on tobacco farms. During this same period they remained about the same on some Corn Belt farms, they increased on cotton farms in the Southeast, and were reduced on dairy farms.

During the past several years the increase in operating expense on tobacco farms has been matched with a corresponding increase in gross farm income, with the result that the level of net farm income has been reasonably well maintained during the period 1947-54 (tables 2 and 3). The importance of tobacco sales as a source of cash receipts has been increasing. Expenditures for purchase and operation of farm machinery have become more important, whereas the percentage of total expenditure for labor has declined. Crop yields per acre, particularly of tobacco, have been increasing, and largely determine the level of farm production. 1/

The net farm income on tobacco-livestock farms in the Bluegrass area of Kentucky is expected to be substantially lower in 1955 than in 1954 chiefly because of a much smaller acreage of burley tobacco. The 1956 income may not be much different from 1955 if present burley tobacco allotments are continued.

The net farm income on tobacco-cotton farms is expected to be considerably higher this year than it was last year, mainly because of a larger production of flue-cured tobacco. The 1956 income may be markedly lower than the income for this year in view of a reduction in flue-cured tobacco allotments.

Operators of either type of tobacco farm, faced with a reduction in net incomes, would turn their attention to alternative courses of action designed to raise their levels of income. Essentially, there are two alternatives: first, to reduce the cost of producing tobacco, and second, to increase incomes from enterprises other than tobacco.

Prepared by Production Economics Research Branch, Agricultural Research Service, USDA

1/ For further details, see U.S. Prod. Econ. Res. Br., ARS. Agr. Inf. Bul.139. Farm Costs and Returns, 1954 (With Comparisons) Commercial Family-Operated Farms by Type and Location, June 1955, pp. 32-33.

In analyzing practices designed to reduce the cost of production of tobacco it is important to distinguish between practices that increase value of tobacco per acre either by increasing yield or by improving the quality of the leaf, and practices that reduce cost by simplifying or mechanizing production. Although engineering problems are complex, the greatest problem in mechanization is manufacture of machines at a price low enough to make their use economical on the characteristically small fields of tobacco.

In general, it is in the tobacco grower's interest to use practices, such as fertilizing, fumigation and irrigation, that increase value of tobacco per acre, as long as additional returns exceed additional costs. Fertilizer expenditures, however, should be carefully examined to make sure that the quantity and composition of plant food are adjusted to the requirements of the soil as determined by a soil test and are conducive to a high-quality product.

Reduction in cost of curing tobacco has possibilities, although they may be of a longer-time character involving considerable capital investment.

Lowering labor requirements in the production of tobacco constitutes the most important aspect of the quest to reduce cost of production.

As the yield of tobacco per acre has gone up more labor has been required, but the labor requirements have not gone up proportionately, so that labor required to produce a pound of tobacco has been reduced over the years. Two factors have accounted for this--first, mechanization, and second, increase in efficiency in the use of hand labor in producing tobacco. About 50 percent of the tobacco-livestock farms had tractors in 1954. About 60 percent of the tobacco-cotton farms had tractors.

As the farm management problems on tobacco-livestock farms and tobacco-cotton farms are different they will be discussed separately here.

Tobacco-livestock farms

An increase in income from livestock enterprises seems to offer more opportunities on these farms than reduction in the cost of production of tobacco.

Although cost of producing burley tobacco may be reduced somewhat by mechanizing most of the preharvest operations, opportunities for reducing cost of harvesting and stripping are limited in the immediate future to what can be accomplished by work-simplification techniques.

Stripping of burley, which requires about 40 percent of the total labor on tobacco, possibly could be done at lower cost at a central warehouse especially equipped with mechanical devices for that purpose.

Increase in income from livestock enterprises is dependent upon larger production of feed, which is entirely possible by improved cultural practices. Cost of producing feed crops could be considerably reduced by mechanizing production. Although the income from livestock enterprises could be increased within the present size of farms, increase in size of farms would eventually become necessary as the importance of tobacco as a source of income declined.

Tobacco-cotton farms

Reduction in cost of production of tobacco probably offers more opportunities to operators on these farms than an increase in income from supplementary enterprises.

Using known labor-saving methods, it is estimated that labor requirements per acre of flue-cured tobacco could be reduced by about 20 percent. 2/ This estimate does not contemplate the use of tobacco harvesters which, according to a study in Florida, reduced hours of labor for harvesting by about 45 percent, and reduced harvesting cost by about 15 percent. 3/ The presently used harvesters represent only the first in a series of steps which could lead to complete mechanization of tobacco harvesting. Some individual growers have an acreage of tobacco large enough to make mechanization of all operations economical, but the great majority of growers do not. Although joint ownership and use of machines by several growers, or custom work, would extend the area of potential mechanization, the longer-time trend would involve an increase in size of farms.

With an eventual sizeable reduction in labor requirements for flue-cured tobacco, the effect on various types of farm labor would differ. The number of sharecroppers would be reduced and, although hired labor might be temporarily increased, there would eventually be a reduction in this category also.

With materially reduced labor costs, the cost of power and machinery would be increased, but not in proportion to the reduction in labor costs, so that cost of production as a whole would be reduced.

Cost of producing cotton could also be greatly reduced by using recommended practices. Labor requirements per acre would be reduced by about 75 percent compared with mule and hand-labor methods. 4/

Cost of producing corn on tobacco-cotton farms could also be reduced by full mechanization. With an increase in use of hybrid seed corn suited to this area, together with other improved cultural practices, the production of corn would be increased. As corn formerly used for feeding mules is released, the supply of corn available for feeding productive livestock or sale as cash corn could be increased substantially.

2/ N. C. Dept. Agr. Econ. A.E. Inf. Ser. No. 40, Saving Labor in Stringing Tobacco, March 1955, p. 2. See also N. C. Agr. Econ. A. E. Inf. Ser. No. 37, Will it Pay to Mechanize Tobacco, Dec. 1954, pp. 30, 45 and 46.
3/ Fla. Dept. Agr. Econ. Agr. Econ. Ser. No. 55-6, Use of Tobacco Harvesters in Columbia and Suwannee Counties, Florida, 1954, March 1955, p. 16.
4/ N. C. Dept. Agr. Econ. A. E. Inf. Ser. No. 41, Make Money on Cotton--Use Recommended Practices, March 1955, p. 34.

Table 1.-Farm costs, commercial family-operated farms, by type, 1954 with comparisons

Type of farm and location	Index numbers of cost per unit of production, 1947-49=100											
	At prices current each year						At 1947-49 prices					
	Average		1951	1952	1953	1954 1/	Average		1951	1952	1953	1954 1/
	1937-41	1947-49					1937-41	1947-49				
Tobacco farms:												
Tobacco-livestock (Kentucky)	48	100	110	112	118	112	112	100	95	93	98	92
Tobacco-cotton (North Carolina)	2/	100	106	118	124	122	2/	100	90	101	104	103
Cotton farms:												
Southern Piedmont	44	100	113	128	122	140	108	100	97	107	102	118
Black Prairie, Texas	44	100	146	133	104	134	104	100	124	108	87	112
Dairy farms:												
Central Northeast	49	100	102	115	107	101	105	100	94	95	90	87
Eastern Wisconsin	48	100	108	116	112	110	110	100	95	97	94	95
Corn Belt farms:												
Hog-beef raising	48	100	111	107	118	119	109	100	95	87	96	100
Cash grain	50	100	117	128	131	123	101	100	98	99	102	96

1/ Preliminary. 2/ Not available.

Table 2.--Tobacco-livestock farms, Bluegrass Area, Kentucky: Costs and returns, 1947-54

Item	Unit	1947	1948	1949	1950	1951	1952	1953	1954 1/
Land in farm	Acre	113	113	113	113	113	113	113	113
Cropland harvested	do	30	30	31	31	30	31	30	30
Tobacco	do	5.1	5.4	5.5	4.9	5.5	5.6	5.2	4.9
Plowable pasture	do	54	54	53	53	54	53	54	52
Total labor used	Hour	4,140	4,220	4,230	4,140	4,120	4,130	3,960	4,070
Percentage of total contributed by:									
operator and family	Percent	68	67	67	67	68	69	70	70
Total farm capital, January 1	Dollar	17,510	19,170	20,450	20,820	23,350	25,530	24,510	23,060
Total cash receipts	Dollar	4,350	5,043	4,666	4,492	5,821	5,709	5,282	5,505
Percentage of total from:									
Tobacco	Percent	67	65	69	66	66	71	71	73
Livestock	do	30	33	29	32	33	27	27	25
Other	do	3	2	2	2	1	2	2	2
Total cash expenditures	Dollar	1,961	2,154	2,238	2,221	2,591	2,731	2,679	2,819
Percentage of total for:									
Labor	Percent	30	31	30	28	28	27	25	26
Crop expense	do	14	14	17	16	15	16	18	18
Feed and livestock expense	do	14	12	9	10	10	11	8	8
Machinery	do	21	22	23	24	27	26	28	28
Other	do	21	21	21	22	20	20	21	20
Gross farm income	Dollar	5,167	5,811	5,425	5,300	6,397	6,645	6,102	6,256
Operating expense	Dollar	2,018	2,169	2,214	2,194	2,514	2,669	2,645	2,817
Net farm income	Dollar	3,149	3,642	3,211	3,106	3,883	3,976	3,457	3,439
Index numbers (1947-49=100):									
Crop yields per acre	Percent	93	106	101	99	107	108	106	122
Farm production	do	91	106	103	96	108	112	107	116
Production per hour of labor	do	92	106	102	97	110	113	113	120
Production per unit of input	do	92	106	102	95	105	108	102	109
Total cost per unit of production	do	103	95	102	109	110	112	118	112
Prices paid for production items	do	96	101	103	104	115	118	118	121
Prices received for products sold	do	103	100	97	102	109	108	105	98

1/ Preliminary.

Table 3.-Tobacco-cotton farms, Coastal Plain, North Carolina: Costs and returns, 1947-54

Item	Unit	1947	1948	1949	1950	1951	1952	1953	1954 1/
Land in farm	Acre	100	100	100	100	100	100	100	100
Cropland harvested	do	41	41	42	40	42	42	42	41
Tobacco	do	9.2	7.0	7.4	7.5	8.5	8.5	7.9	8.0
Cotton	do	6.7	7.6	8.4	5.6	7.6	7.4	7.9	5.8
Total labor used	Hour	7,970	7,120	7,240	6,940	7,670	7,480	7,080	7,060
Percentage of total contributed by operator and family	Percent	43	43	43	43	43	43	43	43
Total farm capital, January 1	Dollar	15,240	16,370	16,760	17,320	18,900	20,900	21,480	20,760
Total cash receipts	Dollar	5,939	6,130	5,586	6,765	8,526	6,946	6,755	7,307
Percentage of total from:									
Tobacco	Percent	79	71	79	85	76	75	82	82
Cotton	do	14	21	12	4	16	17	11	11
Other	do	7	8	9	11	8	8	7	7
Total cash expenditures	Dollar	3,493	3,536	3,486	3,880	4,707	4,425	4,360	4,625
Percentage of total for:									
Labor	Percent	43	43	40	43	45	38	38	38
Crop expense	do	26	25	27	23	23	26	27	26
Machinery	do	16	18	19	21	20	22	22	22
Other	do	15	14	14	13	12	14	13	14
Gross farm income	Dollar	7,271	7,231	6,727	7,694	9,686	8,023	7,956	8,538
Operating expense	Dollar	3,835	3,935	3,834	4,104	5,008	4,785	4,716	5,219
Net farm income	Dollar	3,436	3,296	2,893	3,590	4,678	3,238	3,240	3,319
Index numbers (1947-49=100):									
Crop yields per acre	Percent	96	105	99	101	110	97	97	104
Farm production	do	106	99	95	96	118	105	100	107
Production per hour of labor	do	99	103	98	103	114	105	105	113
Production per unit of input	do	102	102	96	98	111	99	96	99
Total cost per unit of production	do	94	101	105	108	106	118	124	122
Prices paid for production items	do	95	105	100	110	121	114	116	120
Prices received for products sold	do	95	104	101	118	118	108	115	115

1/ Preliminary.

TOBACCO PRODUCTION RESEARCH OUTLOOK

Introduction

Although the total annual acreage of tobacco harvested in the United States has remained approximately the same during the past 20 years, there has been a marked change in the varieties grown for the various types on this relatively stable acreage. It has been estimated that 90 percent of the total tobacco acreage now being planted is to varieties available since 1935. The two most important tobacco types, flue-cured and burley, are now being planted almost exclusively to varieties developed during the past 20 years. Few changes in production methods and practices have been as striking but marked developments have occurred in some areas. The acceptance by farmers of new ideas, findings, methods and varieties for the various tobacco types has been based largely on the results obtained from research concerning production, breeding, disease, and quality investigations by State, Federal, and private industries. Much economy in production has occurred through reducing disease losses and improving yields and quality by breeding and by more adequate fertilization and management.

I. Production Research Outlook

a. Seedbed Management

The production of an adequate supply of healthy tobacco seedlings at the proper time for transplanting has become increasingly difficult. There are many factors involved, such as the location of the bed, fertility, and prevalence of weeds and diseases. The scarcity of suitable wooded areas has made it necessary to locate most seedbeds in open fields on soils which have a low moisture content. Usually there is little or no protection from chilling winds, and the weed hazard is often greater in such locations. Certain diseases, notably blue mold (Peronospora tabacina), and wildfire (Phytomonas tabaci) are prevalent and cause serious losses unless controlled.

The evidence available points to locating the seedbed on a permanent site. Some type of windbreak appears to be desirable, but much research work should be carried out in regard to type of exposure, amount and frequency of supplementary watering and ways of maintaining good physical properties of the soil. Weeds and diseases must be rigidly controlled. Progress has been made in the control of weeds by use of steam and chemicals, but more efficient, inexpensive and effective methods should be developed. Soil fumigation using a gas-tight plastic cover to retain the methyl bromide has given promising results in regard to weed and disease control, but this treatment does not kill all troublesome species, such as hard-seeded legumes and a few other species. Materials to control these species should be sought. More or less effective control of blue mold and leaf spots are available but much more effective and inexpensive controls of these diseases and others, such as anthracnose (Colletotrichum Sp.), should be found. Control in the form of gas, dust, or spray that will not injure the young tobacco seedlings and which will control all troublesome seedbed diseases in one mixture would be desirable.

Prepared by Field Crops Research Branch, Agricultural Research Service, USDA

The use of mineral and organic soil supplements to grow tobacco seedlings most efficiently and inexpensively as to time, method, source, and rate of application does not always give consistent results and should receive more adequate investigation.

b. Field Culture

In most tobacco-producing areas, various diseases coupled with low soil fertility, excessive erosion and loss of soil tilth have often resulted in the production of leaf unsuited to market demands. This is especially true when tobacco is grown year after year on the same ground.

1. Crop Sequence

The crop sequence is important but not well understood. Numerous diseases are more or less prevalent in all tobacco-producing areas. The damage caused by them varies greatly under different cropping sequences. The root knot nematode, for example, is almost universally present in the light soils of the flue-cured tobacco area. On such soils tobacco should not be grown following cotton, soybeans, cowpeas, lespedeza, sweet potatoes, Irish potatoes, or tomatoes, since such crops usually result in the increased development of root knot. At the present time there is no satisfactory cropping sequence which will adequately control root knot nematodes. The chemical treatments available are not entirely effective, are costly, and not easily applied. In some cases, chemical treatments complicate results through improved yields and depressed quality.

The black shank disease (Phytophthora parasitica var. nicotianae) of tobacco is more active when nematode populations are increased by certain crop rotations.

Tobacco should not be grown after peppers, peanuts, tomatoes, or Irish potatoes when Granville wilt (Bacterium solanacearum) is present in the soil. Neither should it follow ragweed or certain other common weeds.

The prevalence and severity of black root rot (Thielaviopsis basicola) and the nematode root rots varies greatly with the crop sequence and length of the rotation. The injury from black root rot is often increased when lime is used to correct soil acidity for the growth of certain legumes.

The use of legumes as green manure crops to immediately precede tobacco cannot be generally recommended since the amount of nitrogen they add to the soil and time of availability is extremely variable. For flue-cured tobacco and some other types, the amount will be frequently too much. Tobacco following a weed fallow of two or more years' duration, provided there are no disease complications, usually results in the production of high quality leaf. Much the same is true of burley tobacco following several years of bluegrass sod. The explanation for these results remains to be worked out. A suitable combination of cultivated crops, one that will consistently give a high yield and a profitable annual return is much to be desired. However, at this time no entirely satisfactory cropping sequence has been found.

2. Tobacco Nutrition

Tobacco is produced to best advantage under a controlled nutrient level. This is particularly true of the flue-cured type where rather definite amounts of nitrogen, phosphorus and potassium must be supplied. The quantities of calcium, magnesium, sulphur, and chlorine that are required are not so well worked out. The same situation prevails in regard to the other types, such as burley, cigar, and Maryland. The amount of the micro-nutrients, boron, copper, iron, manganese, and zinc that must be supplied to the tobacco plant by the fertilizer and from the soil is not too well understood, especially for specific regions and localities.

The availability of the native and added plant nutrients varies tremendously in different soils with varying climatic conditions and the several cropping sequences mentioned above. The soil reaction also is very important but no complete understanding of these relationships exists at this time and remain to be determined. Potash, for example, is often partially unavailable in the native or added form on the silt loam soils where burley and cigar binder and cigar filler are grown.

Excessive amounts of plant nutrients, particularly nitrogen, for flue-cured tobacco must be avoided. The quantity of chlorine available to cigar, burley, and Maryland types should be held to a minimum. These relationships are obscure and much additional information is desirable as to these relationships.

3. Use of Supplementary Water

Tobacco makes the desired, rapid, uninterrupted growth with adequate soil moisture from the time of transplanting until maturity. When the rainfall is inadequate, the use of supplementary water in the form or irrigation gives desirable effects.

The preliminary work which has been carried out indicates that this supplementary water must be applied with discretion. It is well recognized that tobacco will not thrive in an excessively wet or water-logged soil. It is difficult to regulate the use of supplementary water in a humid climate so as to avoid adding large amounts of water at any one time, which may be followed by heavy rainfall and produce the undesirable water-logged condition previously mentioned. It appears that frequent light irrigations are more desirable for this reason than infrequent heavy irrigations, but further work must be carried out to establish the amounts required.

There is some evidence to indicate that the sale content of the water is of considerable importance to quality, but additional trials must be conducted to investigate this factor. Not only is the total salt content to be evaluated, but the content of chlorine, calcium, or other salts need to be studied. The effect of water contaminated with disease organisms, such as black shank, may also be of considerable importance and additional evidence on this point must be sought.

II. Engineering Phases of Tobacco Production*

Curing of tobacco is an important phase in the production of that crop. The quality of the tobacco to be marketed may depend to a considerable extent to the methods, structures and equipment used during the curing period.

Results of engineering research on structures and equipment involved in curing tobaccos give increasing evidence of the need for more accurate control of temperature and relative humidity of the environmental air used in curing. Accomplishment of such accurate control usually involves buildings of tighter construction, perhaps the addition of insulation, frequently changes in ventilator design, and the use of more accurately controlled heating equipment. Use of supplementary heating equipment is increasing for the curing of burley and other air-cured types particularly during periods of humid weather when curing is in progress. Heating equipment which is regularly used for bright-leaf and shade-grown tobacco curing is being improved through more accurate controls. Fuels such as oil and gas are replacing wood and charcoal for heating tobacco curing barns because they are more susceptible to accurate control.

These trends toward improved curing barns and curing equipment seem likely to continue because associated with improved accuracy of control of curing air have been reductions in labor.

III. Outlook by Breeding for Disease Resistance

Numerous varieties of the various tobacco types, especially flue-cured, burley, Maryland, cigar wrapper and cigar binder, have been developed in breeding programs by State, Federal, and private agencies since 1935. It has been estimated that approximately 90 percent of the tobacco acreage harvested in 1954, including all types, consisted of varieties developed since 1935. These acreage estimates by types are presented in the following table.

Estimated tobacco acreage harvested in 1954 of old and new varieties

Tobacco type	Acreage harvested of varieties developed prior to 1935	Acreage harvested of varieties developed from 1935 - 1954	Acreage percentage of new varieties harvested in 1954
Flue-cured	18,000	1,024,200	98
Burley	4,037	399,663	99
Maryland	12,500	37,500	75
Cigar			
Binder	14,700	14,700	50
Filler	30,600	-	--
Wrapper	2,600	10,400	80
Dair Air-cured	23,750	1,250	5
Fire-cured	48,640	2,560	5
Miscellaneous	300	-	-
TOTAL	155,127	1,490,273	90

*Prepared by Agricultural Engineering Research Branch, ARS

An examination of these data indicate that practically all of the flue-cured and burley varieties have been replaced since 1935. In general, this is also true for Maryland, and the cigar wrapper varieties. These new varieties have been accepted and grown by farmers in the various tobacco-producing areas primarily because of their disease-resistance characteristics. These new varieties are resistant to one or not more than three of the major tobacco diseases. The release of seed of these varieties by the various agencies conducting breeding investigations has been an important factor in maintaining the total tobacco acreage on a relatively stable basis during the past twenty years.

Although definite and specific progress has been made through breeding to control tobacco diseases, the problems are far from solved and additional information is needed on practically all diseases including black root rot, black shank, Granville wilt, fusarium wilt, blue mold, wildfire, mosaic, and root knot when alone and in combination with these and other diseases.

a. Wildfire

Wildfire of tobacco is caused by Pseudomonas tabaci (Wolf & Foster) F. L. Stevens, a disease which is quite common in plant beds and fields. It has caused serious losses in every major tobacco-producing area. Differences in resistance have been reported between tobacco varieties to both infection and ease of natural water soaking, one of the factors predisposing plants to infection. The level of resistance, however, found in older varieties of N. tabacum is low compared to that found in several of the species related to N. tabacum, such as N. longiflora, N. plumbaginifolia, N. repanda, N. alata, and N. nudicaulis. Breeding lines with wildfire resistance in burley, dark-fired and cigar tobaccos have been developed from parentage involving N. tabacum and N. longiflora. The recent release of Burley 21 represents the development of the first wildfire-resistant variety. This variety also possesses resistance to black root rot and tobacco mosaic. Additional breeding work is necessary to incorporate this resistance into lines possessing resistance to black shank and fusarium wilt. The breeding program to develop varieties possessing multiple disease resistance becomes more complicated and time-consuming with the addition of each new disease.

b. Black root rot

Black root rot is caused by the fungus Thielaviopsis basicola. Breeding for disease resistance is complicated since four races of the organisms have been recognized. Infection builds up rapidly in fields under continuous tobacco culture particularly if the variety being grown is susceptible to any of the several races of the disease organism. The widespread use of lime has been a contributing factor to the build-up of the black root rot in certain fields. Black root rot has caused serious losses in Tennessee, western North Carolina, Virginia, Kentucky, Wisconsin, and Connecticut Valley. Numerous varieties possessing varying degrees of resistance to this disease have been developed in the various tobacco types, including flue-cured (400, 401, Vamor 48 and 50); Cigar tobaccos (Havana 142, Conn. 49); and burley (Kentucky 16, Kentucky 41A, Burley 1, 2, 11A, 11B, and 21). One of the most promising parental sources of high resistance "immunity" to black root rot is N. debneyi which is being utilized in various tobacco breeding programs. Although varieties possessing resistance

to black root rot are available, the current need is for varieties having higher level of resistance and possessing these factors in combination with resistance to other important diseases in the major tobacco-producing areas.

c. Black shank

Black shank is caused by a fungus commonly called Phytophthora parasitica. Control of the disease has not been easy, particularly where the same land is used year after year for tobacco. Annual estimated losses due to this disease alone in North Carolina and Kentucky have amounted to 7.5 and 1 million dollars, respectively, in rather recent years. Experimental findings indicate that wherever the fungus has become established, positive control is in the development and use of disease-resistant varieties in rotation with other crops. Black shank was first noted near Quincy, Florida, in 1915. By 1924 the situation became desperate and approximately 10 years later a resistant variety, Florida 301, was developed. It has served as the parental source of black shank resistance for the varieties now in commercial production. Although black shank was reported in North Carolina as early as 1921, it did not cause severe losses until around 1930. It was approximately 13 years later before the first black shank resistant flue-cured variety was released to growers in North Carolina. Since black shank disease is spread by moving water, soil, and plants, it has also become generally distributed throughout Tennessee, Kentucky, South Carolina and Maryland, and has caused severe losses in these areas. The release of seed of Oxford 1, 2, 3, and 4 and later Dixie Bright 101 and 102, was a decided help to growers in the flue-cured area. It was not until 1954 that seed of the black shank resistant burley varieties was available to farmers. In the earlier years varieties which possessed a little resistance to this disease stood up well. After the disease incidence has accumulated, there is need for much higher resistance. Efforts to increase the level of black shank resistance from Florida 301 have been fruitless because the more highly resistant breeding lines have proved to be lower in yield and quality. As a result of this situation, black shank resistance of N. plumbaginifolia is being used in some breeding programs in an effort to obtain a higher degree of resistance to this disease. The increase and spread of black shank has complicated the breeding developments in that several of the major diseases now exist on a single farm, and resistance in a single variety to all diseases in the area is necessary for continued economic production.

d. Granville wilt

Granville wilt of tobacco is caused by Bacterium solanacearum and has been present in Granville County, North Carolina, for about 50 years. Due to failure of control of Granville wilt by rotation, the development of resistant varieties appeared to be the only effective control measure. None of the domestic varieties carried resistance to Granville wilt. However, resistance to the disease was obtained from a selection introduced from Colombia, South America. The identification of this resistance in TI 448A and the transfer of these factors into an acceptable flue-cured variety required approximately 10 years, during which time the farmers suffered severe financial losses in crop yields and land values. In 1944, seed of Oxford 26, with TI 448A and flue-cured 400 parentage was released. This variety increased the average yield of tobacco in the flue-cured area from 25 to 50 percent where Granville wilt had previously been serious.

While Oxford 26 appeared to be satisfactory in both yield and quality when released, it was later replaced by Dixie Bright 27 and 28. A development of interest along this same general line was the release in 1949 of Dixie Bright 101 and 102, possessing combined resistance to Granville wilt and black shank. Current experimental information indicates that flue-cured varieties possessing a higher degree of resistance to both of these diseases as well as resistance to root knot, are essential for continued production on many tobacco farms and such varieties are in prospect.

e. Fusarium wilt

Fusarium wilt is caused by the fungus Fusarium oxysporum var. nicotianae J. Johnson. It was first recognized in Maryland in 1916 and by 1940 was fairly common in Kentucky. Cigar tobaccos appear to be highly resistant. In the flue-cured areas it is prevalent in parts of North and South Carolina. Fusarium wilt of tobacco may be caused by at least each of three strains of the fungus, with each being rather specific in its infection capabilities. Since it is a soil-borne organism, an effective method of control is through breeding for resistance. It is of primary concern in Maryland and parts of the burley and flue-cured producing areas. The Maryland variety Robinson Medium Broadleaf is the most widely used resistant strain in that area. Oxford 26 and Dixie Bright 101 and 102 carry resistance to this disease. Burley tobacco varieties, Kentucky 35, Burley 11A and 11B appear satisfactory from the standpoint of wilt resistance, but are susceptible to other diseases which is typical and further indicates the need for multiple disease resistance within individual varieties.

f. Blue mold

Blue mold of tobacco is caused by the fungus Peronospora tabacina Adam. It is a common disease in plant beds in all of the tobacco-producing areas with the exception of Wisconsin. In Georgia destructive epidemics may be expected about every third year, whereas they are less frequent and less destructive in the states as you move northward. Severe losses are practically unknown in Tennessee and Maryland although the disease is destructive in some localities. Shading greatly increases the percentage of plants killed and that is why blue mold is occasionally destructive in the Connecticut Valley shade tobacco fields while Havana and Broadleaf growing nearby in full sunlight are not seriously attacked. Although this disease may be controlled in the plant beds through regular dusting and spraying programs, the practical solution to this problem is resistant varieties and considerable effort has been toward their development. Current information indicates that resistance is conditioned by a number of genetic factors and that these factors are carried by one of the wild species, N. debneyi, which is being used rather extensively in various breeding programs.

g. Mosaic

Tobacco mosaic, a virus disease, is found wherever tobacco is grown. It has been rare in Georgia, but prevalent in Maryland. It is quite common in Kentucky, Tennessee, and Virginia and states producing cigar tobacco. Its virus can be spread from plant to plant merely by rubbing first diseased and then healthy leaves. It is a rather difficult disease to cope with since cured leaves of diseased plants may carry infectious virus for

as long as 25 years. Although careful sanitary measures will reduce the incidence of infection, the development of resistant varieties appears to be the only method for absolute control. A variety, Ambalema, introduced from Colombia, was found to carry resistance to tobacco mosaic and has been used extensively in various breeding programs for this purpose. Although it was possible to transfer this resistance to various types of commercial tobacco, the results have been disappointing since no one has been able to obtain the desired resistance to this disease with acceptable plant type. Tobacco breeders are currently using N. glutinosa as a source of tobacco mosaic resistance, with considerable progress in the development of breeding lines and varieties.

h. Root knot

Root knot was formerly considered the only nematode root disease of tobacco. Although experimental information indicates that root knot can be effectively controlled at least in light soils by fumigation and rotation, the development of resistant varieties would be desirable. It has been found that TI 706, an introduction from Central America, was highly resistant to the nematodes which cause the root knot disease and has been used in breeding programs. Some of the related tobacco species, also carry nematode resistance and are being utilized in breeding programs. Current information indicates that black shank and Granville wilt resistance breaks down in the presence of the root knot disease, thus indicating the need not only for resistance to these diseases but also to the interaction among them. Multiple resistance appears to be a necessity.

IV. Tobacco Insect Research Outlook*

The control of insect pests has long been of great importance in the growing of tobacco. Some insects damage the young plants in the seed beds, others cause stunting of the growing plant or devour or seriously damage large quantities of the tobacco leaves. On cigar wrapper tobacco especially insect damage cannot be tolerated. In spite of widespread use of the available insecticides, the average annual loss to the tobacco crop by all insects for the period 1942-51 is estimated at about 109 million dollars or about 11 percent.

Lead arsenate was used extensively during the first half of the 20th Century to control hornworms, budworms, and flea beetles on tobacco. Research has made it possible to recommend such new chlorinated hydrocarbon insecticides as TDE, DDT, and endrin, which since about 1952 have largely supplanted the use of lead arsenate for control of insect pests on tobacco. These provide more effective control and are less objectionable than the arsenicals from the standpoint of residues. The green peach aphid suddenly became an important pest of tobacco in 1946 in most areas where that crop is grown. Research promptly demonstrated the effectiveness of parathion and its widespread use has enabled tobacco growers to hold down the damage from this serious new pest. Certain insecticides, such as benzene hexachloride and toxaphene, which are effective against tobacco pests, have been shown to impair the flavor of the cured tobacco and growers are cautioned against using such materials. Thus research is not

*Prepared by Entomology Research Branch, ARS

only providing more effective means of preventing losses of tobacco due to insects, but is also enabling growers to protect their crop with less hazard of having it down-graded on the market, or even rejected, because of adverse effect on flavor or the presence of undesirable residues.

Increased attention is now being given to determining the usefulness of natural enemies for the control of insects injurious to tobacco. It has been found that wasps that destroy many hornworms will nest in artificial shelters. Research begun this year in North Carolina suggests that the use of such shelters to attract these wasps to tobacco fields may provide a practical and inexpensive means of effecting substantial reductions in damage due to hornworms. The possibility of utilizing diseases of insects in the control of hornworms, budworms, and aphids on tobacco is also being studied. Should any of these lines of research prove fruitful, tobacco growers might in the future be able to produce their crop with fewer applications of insecticides than are now needed.

An attempt is currently being made to develop, through research, a reliable method whereby tobacco growers could be advised when and where insecticide applications are necessary to control hornworms. Availability of such a method would enable the Extension Service to alert the growers on prevailing hornworm conditions. This would help them to determine when and where treatments are needed and to avoid making insecticide applications when such are not necessary.

V. Quality Outlook

Tobacco quality has long been evaluated by empirical methods associated with color, texture, and aroma of the cured leaf. Also it is recognized that such methods do not always provide sufficient reliable information concerning quality in tobacco. To help meet this situation, tobacco companies generally have rather recently established or expanded chemical evaluation laboratories of considerable size. Scientific evaluation of the leaf and tobacco products in many new and diverse ways, including the utilization of smoking panels, has been undertaken. The earlier chemical determinations used in these laboratories and those of the Federal and State experiment stations were limited principally to ash constituents and large groups of organic compounds, such as total reducing substances or total nitrogen. During the past twenty to twenty-five years, there has been a growing interest between the scientifically trained men in the institutions advising the farmer on how to produce the cured leaf and those in the industry which used this product. Today their interest and activities have become joint though highly specialized and are directed toward the mutual problem of quality. Currently the compounds which make up tobacco are being investigated by several tobacco companies. Each employ large research laboratory staffs, often a group as large as the total number of tobacco chemists in the United States twenty years ago. Even some smaller companies conduct or support some chemical research assistance. Also many of these companies are supporting, either directly or by cooperative activities, research in State and Federal experiment stations and other agencies or consulting organizations on problems related to tobacco quality. These are research activities distinct from, and in addition to work for chemical information on processing control and annual crop evaluation. Quality research has become a cooperative effort and the trends are toward more productive cooperative research in tobacco chemistry.

Nicotine, long recognized as the characteristic compound of tobacco has been investigated for many years. Recently it has been shown that there are numerous related compounds, often heretofore considered collectively that require further investigation and clarification. The same is generally true of most if not all other complex compounds that are associated with quality and use of leaf tobacco. The physical characteristics of tobacco that determine or are associated with quality such as color, texture, and fire-holding capacity, could profitably be investigated. This is a fertile field of investigation where characteristics may be associated with the production of quality leaf and its use values.

As new scientific methods for quality evaluation have been developed, they have been utilized in combination with the older empirical methods. The current trend concerning cooperative efforts among the scientists, growers, and manufacturers, together with more liberal policies for public release of the information obtained by each, is certain to result in better methods of quality evaluation. This is taking place even though the scientific facilities being utilized to study the farmers' problems specifically have not been expanded on a comparable basis to research efforts in solving problems of the manufactuers. This joint effort toward scientific developments in these quality investigations of tobacco now projected toward production problems on one hand and utilization on the other, is certain to produce results helpful to both the farmer and manufacturer even though not as rapidly as we would like.

VI. In Conclusion

High domestic and current competitive world production of tobacco leaf is most certain to lay future research emphasis on quality and economic aspects of tobacco production. To this end the current research emphasis on basic quality characteristics of tobacco and economy of production through improved varieties and practices based on new information plays a most significant role in the research outlook.

MARKETING QUOTAS AND PRICE SUPPORT

Marketing Quotas

The Agricultural Adjustment Act of 1938, as amended, provides for marketing quotas on tobacco to promote, foster, and maintain an orderly flow of tobacco in interstate and foreign commerce, and thereby enable farmers, who cannot do so individually, to work together to maintain supplies in line with demand.

The Act groups the various types of tobacco into eight kinds, as follows:

Flue-cured--Types 11, 12, 13 and 14
Fire-cured--Types 21, 22, 23 and 24
Dark air-cured--Types 35 and 36
Virginia sun-cured--Type 37
Burley--Type 31
Maryland--Type 32
Cigar-filler and cigar-binder--Types 42 through 46 and 51 through 55
Cigar-filler--Type 41

The Act requires the Secretary to proclaim, not later than December 1, a national marketing quota for each kind of tobacco for each of the next three succeeding marketing years, except that if producers disapprove quotas in referenda held in three successive years subsequent to 1952, no quota will be proclaimed until the end of the three-year period for which quotas were disapproved (unless prior to November 10 one-fourth of the growers petition the Secretary to proclaim a quota).

The Act requires the Secretary to announce, prior to the first day of December, the amount of the national marketing quota for each kind of tobacco in terms of the total quantity of tobacco which may be marketed which will make available during the next marketing year a supply of tobacco equal to the reserve supply level. The Act defines the total supply as the carry-over at the beginning of the marketing year plus the estimated production during the current year. The reserve supply level is a normal year's domestic consumption and exports plus 175 percent of a normal year's domestic consumption and 65 percent of a normal year's exports, plus 5 percent thereof.

The following table shows the computation of the national marketing quota for flue-cured tobacco for the 1956-57 marketing year:

Prepared by Tobacco Division, Commodity Stabilization Service, USDA

Flue-cured Tobacco: Types 11-14: Acreage, Yield, Price, Production, Stocks, Supply, and Disappearance, 1945-55

Year	Acreage harvested	Yield per acre	Price per lb.	Production	Stocks July 1	Supply July 1	Disappearance Total	Disappearance Exports	Disappearance Domestic	Ratio supply to disappearance
	1,000 Acres	Lbs.	Cts.	Million Pounds						
1945	1,078.7	1,088	43.6	1,173.5	1,126.3	2,299.8	1,152.4	485.1	667.3	2.0
1946	1,188.8	1,137	48.3	1,352.0	1,147.4	2,499.4	1,212.6	553.4	659.2	2.1
1947	1,161.2	1,135	41.2	1,317.5	1,286.8	2,604.3	1,054.1	359.3	694.8	2.5
1948	883.8	1,233	49.6	1,089.6	1,550.2	2,639.8	1,101.6	382.1	719.5	2.4
1949	935.4	1,191	47.2	1,114.5	1,538.2	2,652.7	1,168.2	438.9	729.3	2.3
1950	958.4	1,312	54.7	1,257.3	1,484.5	2,741.8	1,184.3	427.7	756.6	2.3
1951	1,110.1	1,309	52.4	1,452.7	1,557.5	3,010.2	1,279.4	502.2	777.2	2.4
1952	1,111.3	1,229	50.3	1,365.3	1,730.8	3,096.1	1,244.2	416.6	827.6	2.5
1953	1,021.8	1,245	52.8	1,272.2	1,851.9	3,124.1	1,209.9	431.2	777.8	2.6
1954	1,042.2	1,261	52.7	1,314.4	1,915.1	3,229.5	1,204.5*	434.5*	770.0*	2.7*
1955	995.3*	1,281*		1,275.0*	2,025.0*	3,300.0*				

*Estimated

Formula for Computing Quota (Million Pounds)

Estimated Carryover, July 1, 1955	2,025
Estimated Production, 1955	1,275
Estimated Total Supply, 1955-56	3,300
Estimated Disappearance, 1955-56	1,246
Estimated Carryover, July 1, 1956	2,054
Normal Year's Domestic Consumption	800
Add 175%	1,400
Normal Year's Exports	445
Add 65%	289
Normal Supply	2,934
Add 5%	147
Reserve Supply Level	3,081
Less Estimated Carryover	2,054
Computed Quota	1,027
Add 10% to prevent undue restrictions on marketings	103
National Marketing Quota	1,130

The Secretary apportions the national marketing quota among the several States, on the basis of production during the preceding five years, and converts the State marketing quota (pounds) into a State acreage allotment (acres) on the basis of the average yields per acre during the preceding five years. Local Agricultural Stabilization and Conservation Committees allot the State acreage allotment among farms on the basis of the past acreage of tobacco grown on the farm; the land, labor, and equipment available for the production of tobacco; and other factors. Any producer who is dissatisfied with the acreage allotment established for

his farm may have such allotment reviewed by a local review committee appointed by the Secretary and by the courts.

The Act directs the Secretary to conduct a referendum to determine whether growers of each kind of tobacco are in favor of or opposed to quotas for the next three succeeding marketing years. If more than one-third of the growers voting oppose quotas, such results are proclaimed by the Secretary and the quota becomes ineffective.

The County ASC Committee arranges for the measurement of the acreage of tobacco grown on each farm. If the acreage is not greater than the allotted acreage, all tobacco produced on the farm may be marketed free of penalty and is eligible for Government price support. If the acreage grown on the farm is in excess of the allotted acreage, no tobacco from the farm is eligible for price support and the tobacco is subject to penalty. The farmer may destroy the excess tobacco prior to the marketing of any tobacco from the farm and become eligible for price support and avoid the payment of penalty.

The present quota program was fairly successful in maintaining supply near a balanced position with demand for several years. Production of flue-cured tobacco during the current marketing year is estimated to be 250 million pounds in excess of current annual disappearance. Production of burley tobacco during the preceding four years has exceeded disappearance by about 350 million pounds, and a burdensome surplus has resulted. Stocks of fire-cured and dark air-cured tobacco are excessive in relation to current usings and exports.

Legislation enacted at the last session of the Congress was designed to strengthen the administration of the tobacco marketing quota program. Public Law 21 directed the Secretary to redetermine the 1955 burley quota on the basis of later statistics. This resulted in an over-all reduction of 25 percent in burley allotments for 1955. This law also (1) reduced the minimum burley allotment from seven-tenths of an acre to five-tenths of an acre; (2) provided that any acreage grown in excess of allotments for any kind of tobacco shall not be taken into account in establishing subsequent allotments; (3) increased the penalty on the marketing of excess tobacco from 50 percent to 75 percent of the average market price during the preceding year; and, (4) provided for a reduction in the farm acreage allotment for filing a false acreage report.

Public Law 96 directed the Secretary to make a study and a report to the Congress on the various methods of marketing controls which have been or could be made applicable to burley tobacco. Public Law 279 eliminated the provisions whereby quotas could be approved for one year, and provides only for voting in favor of or opposed to quotas for three-year periods. Public Law 351 provides that in establishing burley acreage allotments for 1956, 1957, and 1958, no reduction will be made for under-planting if the harvested acreage was as much as 50 percent of the allotment during any one of the preceding five years.

Extensive efforts were made to obtain more accurate measurement of tobacco acreages in 1955. Further use was made of aerial photographs. Additional training and closer supervision of reporters was provided. In order to eliminate the so-called tolerance, acreages were carried in hundredths

rather than dropping or rounding to the nearest tenth of an acre. In a further effort to strengthen administration of the program, the Department proposed to request the Congress to amend the law to provide if the acreage harvested on the farm exceeds the allotment, penalty will be due and the tobacco will not be eligible for price support. Present legislation authorizes the disposition of excess tobacco up until the time tobacco is marketed from the farm.

Price Support Program

Early Development

Tobacco prices were first supported with Federal funds by the Farm Board on the 1931 crop of type 22 and type 23 fire-cured tobacco. In 1936, Commodity Credit Corporation began supporting tobacco prices and at the same time assumed from Reconstruction Finance Corporation all outstanding loans on 1931 through 1935 crops. CCC first extended cigar tobacco price supports on the 1938 Southern Wisconsin crop. The supports were made on a farm storage loan basis. The results indicated that farm storage loans were not a satisfactory price support method for tobacco.

With the outbreak of World War II in September 1939, British buying power withdrew from the flue-cured market. A market holiday was declared during which a marketing quota referendum was held. Quotas were approved and a price support purchase program using regular commercial buying organizations was inaugurated in the flue-cured area. Purchase programs were continued in the flue-cured area through the war years. A burley tobacco price support loan program was inaugurated with the 1940 crop.

Support Level

The support level for the various kinds of tobacco ranged from 65 to 75 percent of parity in 1940. In 1941, the level was increased to 85 percent of parity and their extension made mandatory by law. In 1942, the loan level was increased by statute to 90 percent of parity. The Agricultural Act of 1948 put tobacco price supports on a sliding scale and on modernized parity. The Agricultural Act of 1949 put tobacco supports at (a) 90 percent of parity if quotas are in effect, (b) zero if quotas have been disapproved, and (c) on a sliding scale if quotas are not in effect but have not been disapproved. Changes in the method of calculating parity contained in the Act of 1949 increased the support level for all kinds of tobacco substantially beginning with the 1950 crop. The same Act made provision for announcement of minimum support levels prior to planting time.

Grade Support Price Differentials

The Department must convert the support level into support prices for each of the approximately 100 grades of the major kinds of tobacco. The first step in this process is determining the historical average volume in each grade based on data accumulated and supplied by the Tobacco Division, AMS. The next step is the establishment of a support price for each grade which when multiplied by the volume in each grade will equal the support level.

In the case of tobacco, these individual grade rates or differentials are established by a "collective judgment" process rather than by statistical derivation. The judgment of all segments of the tobacco industry and particularly of the grower associations is obtained and utilized. Support prices by grades are intended to reflect the current relative value in the market of the various grades, excluding temporary supply imbalances and price fluctuations. The grade support rates are announced prior to the beginning of the marketing season.

How Price Support is Offered

In the auction marketing area, growers display their tobacco for sale in the auction warehouse in the usual manner. U. S. Tobacco Inspectors of the Tobacco Division, AMS, inspect each lot of tobacco assembled for the sale and assign a U. S. Government grade. The assignment of a Government grade has the effect of establishing a "silent bid" of the support rate for the lot of tobacco. The tobacco is then auctioned and any lot upon which the high bid in the auction does not exceed the support price, is consigned to the Association under contract with CCC to handle the price support program in the area unless the grower is a non-cooperator under the quota program or declines to join the association.

In the non-auction areas, the grower delivers his tobacco to a central receiving point established and operated by the contracting association where the Government grade is assigned. The grower then decides whether to consign the tobacco to the association to be pledged for loan or to remove it from the receiving point and make other disposition arrangements.

Tobacco Price Support Program Operating Responsibility

The Tobacco Division, CSS, is assigned the responsibility for making price supports available. The Division prepares an annual program authorization, which when approved by the Board of Directors, CCC, and the Secretary sets forth the basic policy. Since 1946, the annual program authorization has provided for making price support available only through non-governmental organizations, usually grower cooperative associations. Pursuant to a loan agreement between CCC and the association, the association contracts with auction warehouses so that the warehouse pays the grower for the tobacco consigned for loan in the same way he pays the grower for tobacco purchased by any buyer. The warehouse is reimbursed by the association with funds borrowed from CCC through a bank in the area acting as a fiscal agent for CCC. The tobacco is removed from the warehouse by the tobacco packing company under contract with the association to redry and pack the tobacco. After the tobacco is packed, it is shipped to designated storage warehouses under contract to the association. In the non-auction areas, the association generally owns or leases the receiving point but contracts commercially for the sorting and packing services. The associations select the packing and storage contractors, but the Tobacco Division, CSS, acting for CCC, reserves the right to disapprove any facility which is determined to be unsatisfactory.

The relationship between CCC and the associations is unique as contrasted with the normal lender-borrower relationship, since the loan is non-recourse and the level and amount of the loan is not related to the assets

of the association. The relationship is in many respects similar to a "joint account" business relationship; that is, CCC provides the money and the association provides the personnel and operating management.

Sales Prices and Sales Policies

The associations offer the loan tobaccos for sale at catalogue list prices. In establishing list sales prices, the collective judgment approach is again utilized with the Government personnel and the association sitting down together and arriving at the prices at which each grade and lot is to be offered. Generally, a small mark-up is placed on the tobacco since the primary objective is to sell the tobacco for enough to fully repay the loan. The extent to which the mark-up is expected to achieve more than this is determined by sales prospects in the light of the supply, demand and price situation. Obviously, the tobacco can be sold with enough mark-up to produce an overage for the grower only when supplies are not excessive. The tobaccos are sold by the associations on a first come, first served basis. Prices are the same whether the tobacco is for domestic use or exportation. Sales are made on a commercial invoice basis as distinct from a cash on delivery basis.

How Sales Proceeds are Applied to the Loan Indebtedness

The tobacco price support program differs from other price support operations in that neither the grower nor the association is permitted to redeem and withdraw from loan a particular lot or grade of tobacco. Instead, as sales of loan tobacco are made, the full sales proceeds, including any mark-up above the amount loaned on the tobacco, are applied to the crop indebtedness. In this way, the mark-up on the grades which sell readily serves to reduce the indebtedness on the remaining tobacco and thus reduces the risk of loss to CCC. Also, the loans have no maturity date and usually remain outstanding until the loan collateral is all sold.

Until recently, the tobacco price support program has been handled on a straight crop year "pool" basis; that is, any net gains remaining after repayment of the CCC loan for each crop year was retained by the Association for the benefit of the participating growers and any deficit resulting from the sale of the tobacco of each crop year for less than the amount of the CCC loan was absorbed by CCC. However, recently the associations were offered an arrangement under which one-half of the "overplus" of any crop year will be applied toward the loan indebtedness of another crop year in exchange for a reduction of approximately one percent in the interest rate, effective at the end of the marketing year for each crop. The other half of the "overplus" will constitute "net gains" for the growers. This arrangement has been accepted by most of the associations and should significantly reduce the risk of loss to CCC.

Summary

The Commodity Credit Corporation has financed, from the inception of the program through September 30, 1955, a total of more than four billion pounds of tobacco having a value of almost $1,900 million. These operations have resulted in a recorded gain to CCC of about $4,750,000. These

figures do not take into consideration interest income to CCC on the tobacco loans which have been repaid, the interest expense to CCC for funds borrowed, fees paid to banks servicing the program, and the applicable portion of CCC's general overhead expenses involved in administering the program.

The total interest income to CCC collected from tobacco loans on the 1946 and subsequent crops has amounted to about $28,700,000 through September 30, 1955. Offsetting this income are the CCC expenses which include the cost of money to CCC (interest expense) which would roughly approximate $16,000,000, fees paid to servicing agent banks of about $400,000, and other general overhead expenses which are applicable but are not charged against the individual commodity programs. The inclusion of these items of income and expense in determining the over-all program results would increase the gain to CCC shown above an additional $11,000,000 to $12,000,000. The gain indicated above does not include the net gains for the growers of about $18,000,000 which the grower cooperative associations have realized after repayment of the CCC loans, including interest, on those crops which have been completely disposed of since 1946.

CCC's current investment in tobacco, as of September 30, 1955, amounts to almost $500,000,000, on about 937 million pounds, packed weight. The bulk of this tobacco is of the 1951 through 1955 crops, although there remain fairly small quantities of tobacco of the 1946 through 1950 crops. Following is a table which shows the total quantity and value of tobacco financed by CCC and the balance on hand as of September 30, 1955.

Tobacco Financed by Commodity Credit Corporation
from Inception of Program to September 30, 1955

Crop Year	Total Financed		Balance on Hand, Sept. 30, 1955	
	Quantity* (1000 lb.)	Value ($1,000)	Quantity* (1000 lb.)	Value ($1,000)
1931 thru 1945	1,680,834	$ 707,751	--	$ --
1946 thru 1950	1,080,492	468,135	35,933	12,930
1951	237,159	131,190	75,613	39,118
1952	328,762	165,030	116,425	48,646
1953	255,638	118,866	224,783	104,070
1954	338,475	199,548	326,277	192,765
1955	158,079	101,956	158,079	101,930
Total	4,079,439	$1,892,476	937,110	$499,459

*Packed weight.

TOBACCO CROP INSURANCE

Federal all-risk crop insurance on tobacco crops is now operating in 127 counties throughout the various tobacco-producing areas. Through the medium of this insurance 111,168 tobacco farmers made sure in 1955 that hazards beyond their control could not rob them of their production costs as well as their profit.

Tobacco crop insurance has been operating since 1945 when it was initiated in 13 counties with 12,587 farmers availing themselves of this first opportunity presented to U. S. tobacco farmers to protect their crop investments through insurance against losses from the natural production hazards of weather, disease and insects beyond their control. Since its start, the number of counties in which tobacco crop insurance was offered has been gradually expanded and the volume of business has increased from $676,691 of premium income in 1945 to $2,708,014 in 1955. The total protection provided in 1955 was $72,664,452.

The coverage offered under all-risk crop insurance is designed to cover a major part of the cost of producing the tobacco crop. The premiums are established on the basis of the risk of producing the tobacco crop and are intended to cover indemnities and build premium reserves for use in years when widespread crop disaster strikes the tobacco crop such as 1953 when crop insurance paid $1.88 in losses for each $1.00 of premium collected that year. After eleven years of operation, the tobacco insurance experience shows a small premium reserve accumulated. Premiums have exceeded the indemnities paid under the total program in nine of the eleven years. The 1955 experience was good on an over-all basis although severe losses occurred due to the hurricane and flood damage in a few counties with indemnities in Hartford County, Connecticut, expected to approximate $400,000 when loss adjustment work is completed.

Federal crop insurance is a type of insurance not available from private insurance companies that is offered by the Federal Crop Insurance Corporation, an agency of the United States Department of Agriculture. It covers against essentially all of the unavoidable causes of crop losses such as drought, flood, hail, wind, frost, lightning, fire, excessive rain, snow, wildlife, hurricane, tornado, insect infestation, plant diseases and such other unavoidable causes of loss as may be determined by the Corporation's Board of Directors.

Insurance of the crop is effected by guaranteeing the farmer a specified amount of protection, and if his returns fall below this guarantee, he is indemnified for the shortage. It enables the farmer to put a floor under the amount of loss he could suffer in the event of crop failure. He must, of course, apply for the protection before he plants the crop. His contract continues in force from year to year unless cancelled, and the amount of protection and premium is established annually from the insured's report of all insurable acreage of tobacco in which he has an interest at the time of planting. Coverages and rates vary between counties and farmers within counties based on production history and the risk of loss.

Prepared by Federal Crop Insurance Corporation, USDA

Quality is an important factor in the production of tobacco and is recognized in the crop insurance protection by using the price at which the tobacco sells to value the production in determining the amount of loss. Thus, if the general quality of a farmer's crop is unusually low--perhaps an unusually large proportion of low grades--this poor quality will be reflected in the price at which it is sold and consequently in the indemnity.

While the price at which tobacco is sold is related quite closely to the quality, it also is affected by the level of the general market price for tobacco of that type. To exclude payment of indemnity for decline in general market values--not quality factors--several methods are used. Under one method the coverage is established at the beginning of the growing season in pounds and is converted to a monetary coverage after the marketing season is over on the basis of an average market price for that type of tobacco. Thus, if a farmer's coverage were 1,000 pounds, the coverage in dollars at an average market price of 40 cents would be $400. If he produced 1,000 pounds and sold it in the auction market for $300, his loss under insurance would be $100. This loss was due to the fact that his tobacco sold for 10 cents a pound under the market average for that type of tobacco and was probably due to poor quality although certain other factors may be involved. Had he produced less than 1,000 pounds and sold it at an average price of 30 cents, his indemnity would have been larger and due partly also to loss in quantity.

The plan described in the preceding paragraph was the first one used in tobacco insurance. Later to meet the desire for a coverage fixed in dollars at the beginning of the season a different plan was used in some counties. The coverage was set in dollars at the beginning of the season but was low so as to minimize any price risk. This was originally named "investment insurance." A more recent modification has been to provide a higher level of such insurance (expressed in dollars at the beginning of the season) but with a provision that if the average market price should turn out to be lower than a price considered in setting the coverage that a somewhat parallel reduction would be made in the amount of coverage.

Since tobacco losses cannot be determined until after the insured tobacco is sold and after the general average market price can be determined, adjustment of losses cannot be performed immediately after harvest as for other crops. Insurance on other crops terminates upon removal from the field, but insurance on tobacco continues while in the barn.

In recent years a combination contract has been used in tobacco under which the operator may insure his interest and the interest of all his sharecroppers under one contract with losses settled on the basis of each unit operated by a sharecropper and the acreage in which the operator has 100 percent interest as a separate insurance unit. This has simplified the handling of insurance for both the Corporation and the large tobacco operator who formerly had to co-sign for each individual sharecropper who had an insurance contract.

The location of the insurance counties by states, the potential participation and the percent of farmers participating in 1955 are summarized below:

State	No. Counties	Potential	% Participation
Connecticut	1	1,244	81
Florida	5	5,485	32
Georgia	16	25,700	16
Kentucky	27	80,318	20
Massachusetts	1	721	52
North Carolina	26	124,950	26
Ohio	3	5,251	45
Pennsylvania	1	4,770	25
South Carolina	8	24,938	19
Tennessee	23	63,112	41
Virginia	14	29,240	61
Wisconsin	2	6,843	35
	127	372,572	30

The U. S. summary of tobacco crop insurance experience by years follows:

Year	Number Counties	Farmers Insured	Liability	Premiums	Indemnities	Loss Ratio
1945	13	12,587	$ 14,490,906	$ 676,691	$ 532,124	.79
1946	19	13,815	16,821,308	800,135	329,564	.41
1947	19	14,676	15,592,463	701,565	702,194	1.00
1948	32	31,605	21,355,857	655,392	284,750	.43
1949	35	35,023	22,921,840	740,441	489,000	.66
1950	52	71,956	47,555,529	1,461,271	886,695	.61
1951	69	76,426	49,947,086	1,598,086	779,270	.49
1952	82	76,973	51,653,133	1,557,127	1,212,783	.78
1953	103	102,691	67,948,277	2,045,671	3,854,406	1.88
1954	107	96,579	70,634,250	2,364,468	2,055,830	.87
1955	127	111,168	72,664,452	2,708,014	1,150,815	.42
Total		643,499	$451,585,101	$15,308,861	$12,277,431	.80

In addition to all-risk insurance on tobacco, the Federal Crop Insurance Corporation also insures cotton, wheat, corn, flax, dry edible beans, soybeans, barley, and citrus fruits under single commodity contracts and various combinations of these crops and a few others under a Multiple insurance plan.

Additional information regarding Federal All-Risk Crop Insurance can be obtained from the Federal Crop Insurance Corporation, United States Department of Agriculture, Washington 25, D. C.

ACREAGE, PRODUCTION AND PRICES OF TOBACCO

Crop reporting is one of the oldest Government agricultural services. It was begun in 1839 as a function of the Patent Office - over two decades before the founding of the U.S. Department of Agriculture.

The Crop Reporting Service now collects a variety of basic information on production, supplies, and prices of farm products. The primary source of this information is some 600,000 farmers and ranchers in the United States who serve as voluntary crop reporters. Additional information is supplied by some 83,000 local merchants; 8,500 ginners, 14,000 mills, elevators, and warehouses; 10,000 hatcheries; 28,000 dairy plants; and 14,000 meat packers; and many State and Federal agencies and trade organizations.

The figures on completed questionnaires sent in by these reporters are listed and added in the State statistician's office. Averages and other statistical measures are computed, and crop and livestock estimates are made for the State. These State estimates are then forwarded to Washington, D.C. and again reviewed by the Crop Reporting Board which has final responsibility for the estimates. The following releases contain statistical data on TOBACCO:

I. Reports on Acreage:

(a) Prospective Plantings as of March 1, released about March 17.
(b) Acreage for harvest as of July 1, released about July 10 in the July issue of Crop Production.
(c) Harvested acreage, released in Crop Production, Annual Summary about December 20.

II. Forecasts of Yield and Production:

These are made as of the first of each month, July through November, and published in Crop Production for those months. A year-end estimate of acreage, yield and production is published in the Annual Summary. This estimate is subject to further revision the following May when final check data become available.

III. Mid-month Prices Received by Farmers:

This series is limited to types 11 through 37. Mid-month prices are published by States (for types 11-37 combined) and by types (on a U.S. basis) each month during the marketing season in Agricultural Prices, which is issued near the end of every month. Prices are shown for individual types only during the marketing season for each type.

Prepared by the Crop Reporting Board, Agricultural Marketing Service, USDA.

IV. Season Average Prices Received by Farmers for Tobacco:

Preliminary estimates are published for all tobacco for States in which sufficient sales have been made to establish a price in Season Average Prices and Value of Production, issued about December 15. Season average price estimates are published by types by States along with the revised production estimates in the May general crop report. Final prices are published for Maryland type 32 the following December.

V. Revisions:

Revised estimates of acreage, yield, production, price and value, based on final sales and other check data, are published in May and December following the year of production.

VI. Retail Prices Paid by Farmers for Cigarettes and Smoking Tobacco:

These data are collected twice-yearly. Cigarette prices are surveyed as of March 15 and September 15; smoking tobacco as of June 15 and September 15. U. S. average prices are published in Agricultural Prices the month following the month of the survey. Yearly averages (of the two surveys) are published by States usually in the February issue of Agricultural Prices. Prices by States for each survey are released in Crops and Markets.

These estimates of tobacco acreage and production are based on voluntary reports (numbering over 85 thousand last year) from tobacco farmers, acreage measurements by ASC offices, and sales data from government and trade sources. Estimates of prices received by farmers are based largely on information supplied by the Market News Service and State departments of agriculture for types 11-37, and for cigar type tobaccos, voluntary reports from tobacco buyers and farmers, other trade sources, and price data from ASC offices. Estimates of prices paid by farmers for tobacco products are based on voluntary reports from retail merchants.

Over ten thousand of these reports were received last year. For a detailed description of methods used by the Crop Reporting Board in developing these estimates see The Agricultural Estimating and Reporting Services of the United States Department of Agriculture, Miscellaneous Publication No. 703.

GRADING, MARKET NEWS, AND STOCKS REPORTING

Having produced a crop of tobacco, the farmer is faced with the problem of selling it for the best possible prices.

First, he needs to prepare his tobacco for market so that it meets the requirements of prospective buyers. But unless he knows about how much each lot is worth at current market prices, he has no reliable method of determining if offers are reasonable.

When a lot of tobacco is sold at auction, many factors other than type and quality may influence the selling price. As a result, it is not unusual to see parts of a split lot sold for different prices. Nor is it uncommon for selling prices of tobacco of the same quality and other identical characteristics to vary considerably among different auction markets. This price behavior is to a large extent inherent in the system of auction selling.

The situation has been even worse outside the auction market areas, where a farmer must wait for buyers to come to his farm. He must then decide whether to accept or reject an offer, with little or no information upon which to base his decision.

For many years, this situation created considerable uncertainty and confusion among farmers. To help overcome the problem, farmers found that they needed:

1. A system of standard grades, uniformly applied, for classifying their tobacco according to type, quality, and other significant characteristics.

2. A good working knowledge of how properly to prepare their tobacco for market.

3. Reliable reports on current market prices according to standard grades.

These needs are met by the services authorized in The Tobacco Inspection Act of 1935. The Federal inspection, demonstration, and market news services of the U. S. Department of Agriculture, which are based on Government standard grades, provide an impartial and relatively accurate measuring stick of grades and prices which each grower can use.

U. S. standard grades for tobacco are determined by division and subdivision according to type, quality, and other significant characteristics until a point is reached at which further subdivision is neither essential nor desirable. Each final subdivision is called a grade.

Of necessity, there still must be a limited quality range within each grade which may be reflected in the prices bid in the auction. But when a load of well-cured tobacco has been properly tied, sorted, and delivered to an auction market, and each basket has been graded by an experienced and unbiased Federal tobacco inspector, the grower has only to refer to the current market news report to determine if the bid on a particular basket is within the normal price range for the grade. In short, he is equipped to make an intelligent decision as to whether he should accept or reject the bid.

Prepared by Tobacco Division, Agricultural Marteting Service, USDA.

It should be realized, however, that both services furnish information only. Grades placed on tobacco by the inspection service do not govern buyers' bids or offers; they supply information for use by growers regarding the quality of tobacco offered for sale. The market news service does not establish prices; it only records and reports current average prices established by sales. But if the service is used properly, it can go far toward preventing losses suffered by growers when the price offered for tobacco is less than its current market value.

Federal grading has another very important function. It is the basis for the Federal price-support loan program. The Federal grade, recorded by the Federal inspector on the auction warehouse ticket, establishes the rate of "advance" for the basket. By referring to the schedule of "advance" rates, by grades, each grower can quickly determine the loan rate per pound for the basket. He need not take less than this price if he is otherwise eligible to participate in the Federal price-support program.

All tobaccos pledged for loans are reexamined by Federal inspectors at redrying or packing plants. This is done in order to assure a uniform pack which necessitates appropriate grade changes. During the past marketing season inspectors were assigned to 85 processing plants for this purpose. These tobaccos are pledged for loan under the CCC price-support program and are handled by growers' cooperatives and this inspection is performed on a reimbursable basis as a service to the cooperatives.

Since the Act limits free and mandatory inspection to auction markets, the only inspection available in non-auction areas (cigar types) is provided on a reimbursable basis. As a result, inspections in these areas are confined largely to tobacco pledged by loans under the price-support program. This tobacco is delivered to grower cooperatives by producers and the inspection, just as in the auction area, is performed on a reimbursable basis as a service to the cooperatives.

In each marketing area the market news office is furnished grade price data by employees stationed on representative markets. Following the auction, price data by grade are recorded by a market reporter or recorder. These currently prevailing prices are sorted as to grade, tabulated, summarized, and transmitted by the market recorder to the applicable area market news office. Daily and other market reports and releases issued in the form of "market news" are predicated on a continuous flow of prevailing market information as reported by market recorders located throughout the marketing area. At the close of the marketing season for each general class of tobacco sold at auction, an annual Tobacco Market Review is issued. These reviews furnish a broad summary of the statistics and pertinent market news data relative to the season"s marketing operations.

The Department works with agricultural colleges, county agents, vocational agriculture teachers, chambers of commerce, and other civic and farm organizations in providing grade demonstration and educational services. Usually, a grading demonstration is arranged by the county agent or agricultural teacher and is held on a tobacco farm at the time the crop is being prepared for market. The inspector conducting a demonstration explains how grades are determined, how to use the market news service, and demonstrates how to strip, sort, and bulk the tobacco so it can be sold at the highest price consistent with quality.

Since 1946 all auction markets have been Federally graded. Currently there are 177 established auction markets (978 warehouses in these markets) and total volume of tobacco inspected on these markets is over 2 billion pounds annually.

The tobacco stocks report, issued quarterly, contains a summary of stocks of leaf tobacco owned by dealers and manufacturers. Collection of statistics relating to inventories of leaf tobacco was first authorized by Congress in 1912. Originally reports were made semi-annually. Quarterly reports were initiated in 1917, and beginning in 1929-30 reports have shown quantities of tobacco by type, official U. S. designations, and quality groupings. The stocks statistics are based on schedules received each quarter from about 800 dealers and manufacturers in the United States and Puerto Rico.

Tobacco stocks reports, because of the fundamental information derived from them, are most important in analyzing and appraising the tobacco situation. Stocks at the beginning of the marketing year, plus the current crop usually in the production or market channels, constitute total supply. If stocks on hand at the end of the marketing year are subtracted from total supply, the difference is total disappearance during the year. Duration of supplies in relation to disappearance is important and this information is used extensively by dealers, manufacturers, and grower groups in determining when and to what extent supplies are long or short in relation to requirements.

The annual report on tobacco statistics provided for by the Tobacco Stocks and Standards Act is a comprehensive compilation of the most frequently used statistics relating to tobacco. It brings together in one publication series of statistical data relating to the developments in the tobacco industry.

Requests for the Tobacco Stocks Report and the Annual Report on Tobacco Statistics should be sent to the Tobacco Division, AMS, Washington 25, D. C.

The

DEMAND AND PRICE SITUATION FOR FOREST PRODUCTS

1956

FOREST SERVICE
AND
COMMODITY STABILIZATION SERVICE
U. S. DEPARTMENT OF AGRICULTURE

November 1955

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Foreward

This report was prepared as background information for the Outlook Conference held by the U. S. Department of Agriculture in November 1955. The analysis of timber products was prepared by the Division of Forest Economics Research, Forest Service, and the analysis of naval stores by the Tobacco Division, Commodity Stabilization Service.

The outlook for 1956 is based on certain assumptions specified by the Agricultural Marketing Service. Those include a slight increase over 1955 in total economic activity and the level of construction. The brief analysis of the outlook for 1975 is based largely on assumptions concerning population trends, Gross National Product and other related factors contained in a report "Timber Resource Review", published by the Forest Service, U. S. Department of Agriculture in September 1955.

Outlook Summary

Lumber

In response to record levels of construction and industrial activity in 1955, lumber production during the first half of the year was considerably above the level attained during the first half of 1954. For the year as a whole, it is estimated that lumber production will amount to 39.5 billion board feet, about 5 percent above 1954. The West is expected to produce about half of the lumber cut, the South 35 percent and the North 15 percent.

Imports of lumber during the first half of 1955 also have been higher than in the corresponding period in 1954, and imports for the year may amount to about 3.2 billion board feet. Exports are expected to reach 1 billion board feet, or 300 million feet above the 1954 level. Lumber consumption during 1955, after allowing for some increase in the level of stocks, is expected to total about 41.0 billion board feet.

During 1956 it has been assumed that the level of construction and industrial output will increase slightly over the level attained in 1955. However, residential construction, the most important single end-use for lumber, is expected to decrease somewhat. Lumber consumption in 1956 may therefore fall slightly below current levels.

Between January and September 1955 the wholesale price index of lumber increased from 120.0 to 127.1, a rise of 6 percent. This level is slightly above the previous all-time peak of 126.7 reached in March 1951. Little change in prices is expected in 1956.

It is expected by 1975 that potential demand for lumber in the United States may amount to at least 46 billion board feet - 12 percent above the level of consumption in 1955. This estimated increase in potential demand for lumber is considerably below expected increases in population and Gross National Product. It assumes some further substitution for technological reasons and somewhat higher relative price levels for lumber.

Pulpwood

During the first half of 1955 pulpwood consumption was 15 percent above the corresponding period in 1954 as a result of an exceptionally high level of demand for paper and board. It is estimated that total consumption during 1955 will amount to about 33 million cords, or 13 percent higher than consumption in 1954, and 95 percent higher than consumption in 1945. This estimate of pulpwood consumption does not include the equivalent of an estimated 10 million cords of pulpwood that will be imported in 1955 in the form of woodpulp, paper and board.

In 1956 some further increase is expected in pulpwood consumption in response to increased demand for paper and board resulting from further increases in population and the assumed rise in Gross National Product and the continuing development of new uses for paper and paper products.

Pulpwood production from domestic forests in 1955 is expected to amount to 30 million cords or 11 percent more than the 27 million cords produced in 1954. The South is expected to account for about 60 percent of total production, the North 22 percent and the West the remaining 18 percent. Southern pine is expected to account for about 50 percent of total domestic pulpwood production, other softwoods 35 percent and hardwoods 15 percent.

The new peak in pulpwood consumption in 1955 marks a continuation of a period of extremely rapid growth in the pulp and paper industry. Since 1946 the industry has expanded rapidly through construction of new mills and addition to or modernization of existing mills. Expansion has been particularly rapid in the South where more than half of the woodpulp industry is now located.

Except in the West, the woodpulp industry depends largely upon pulpwood cut from farms and other small forest holdings. In the South, for example, about 75 percent of all pulpwood produced is cut from farm forests and other small ownerships.

Pulpwood prices have shown little change since 1951. In the Southeast, for example, prices of rough pine pulpwood have remained at about $13.85 per cord. During 1956 no significant change in the price of pulpwood is anticipated.

By 1975 it is estimated that the total demand for pulpwood will amount to at least 56 million cords, or 30 percent more than current use. It is expected that about 2 million cords may be imported in the form of pulpwood and the equivalent of about 12 million cords in the form of woodpulp and paper. Thus demand on domestic forests in 1975 may amount to at least 42 million cords, or 40 percent above current production. Sufficient supplies of domestic pulpwood are expected to be available to meet this level of domestic demand without substantial increases in pulpwood prices.

Veneer Logs and Bolts

Consumption of hardwood veneer logs since 1951 has amounted to about 1 billion board feet per year, a level of consumption that is expected to be maintained during 1956. Consumption of softwood veneer logs, practically all of which is concentrated on the West Coast, has increased from 1.2 billion feet in 1951 to an estimated 2.0 billion board feet in 1955. Most of this increase is attributed to the expanding use of softwood plywood in construction. Some further increase is expected in the consumption of softwood "peeler" logs in 1956.

Looking further ahead, substantial increases are expected in the demand for both softwood and hardwood veneer logs. By 1975 the potential demand for softwood veneer logs may amount to 2.7 billion board feet and hardwood veneer

logs to 1.8 billion board feet. A potential demand of 4.5 billion board feet would represent an increase of 50 percent over the 1955 level of consumption.

Other Timber Products

Consumption of fuelwood in the United States continues to decline as a result of shifts to other fuels and reduced farm population. In 1955 fuelwood cut from roundwood, excluding plant residues used as fuel, amounts to about 25 million cords. By 1975 the demand for fuelwood is expected to be considerably lower than that now prevailing.

Consumption of miscellaneous industrial wood products such as poles and piling, posts, mine timbers, and a variety of other minor timber products in 1956 is expected to remain near the current level of about 700 million cubic feet a year. By 1975 the potential demand for such miscellaneous industrial wood is expected to be slightly above the level prevailing in 1955.

Naval Stores

Prices for rosin and turpentine are expected to stay close to present relatively high levels well into 1956. Domestic consumption of rosin and turpentine during the present crop year are expected to be considerably higher than a year earlier with no important change likely in 1956. Supplies of rosin in the 1956-57 crop year are expected to be slightly lower than this year. Little change is anticipated in supplies of all types of turpentine. Exports of both rosin and turpentine will be lower this year because of increased foreign production. No significant change in exports is expected next year.

The favorable market situation continues the trend which started more than 2 years ago. The 1955 loan program has been inactive. A substantial part of CCC rosin and turpentine stocks have been sold this year and additional quantities are likely to move out of CCC stocks before the close of the crop year on March 31, 1956.

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The Demand and Price Outlook for Lumber

Lumber consumption near record levels

Lumber consumption in the United States reached an all-time peak of about 45 billion board feet in 1906 (Chart 1). Consumption declined thereafter, except during the construction boom in the 1920's, to a depression low in 1932. Consumption then recovered sharply to a 1942 peak just under the 1906 level of lumber use. The high level of consumption in the post-war years reflects the large increase in construction and general business activity.

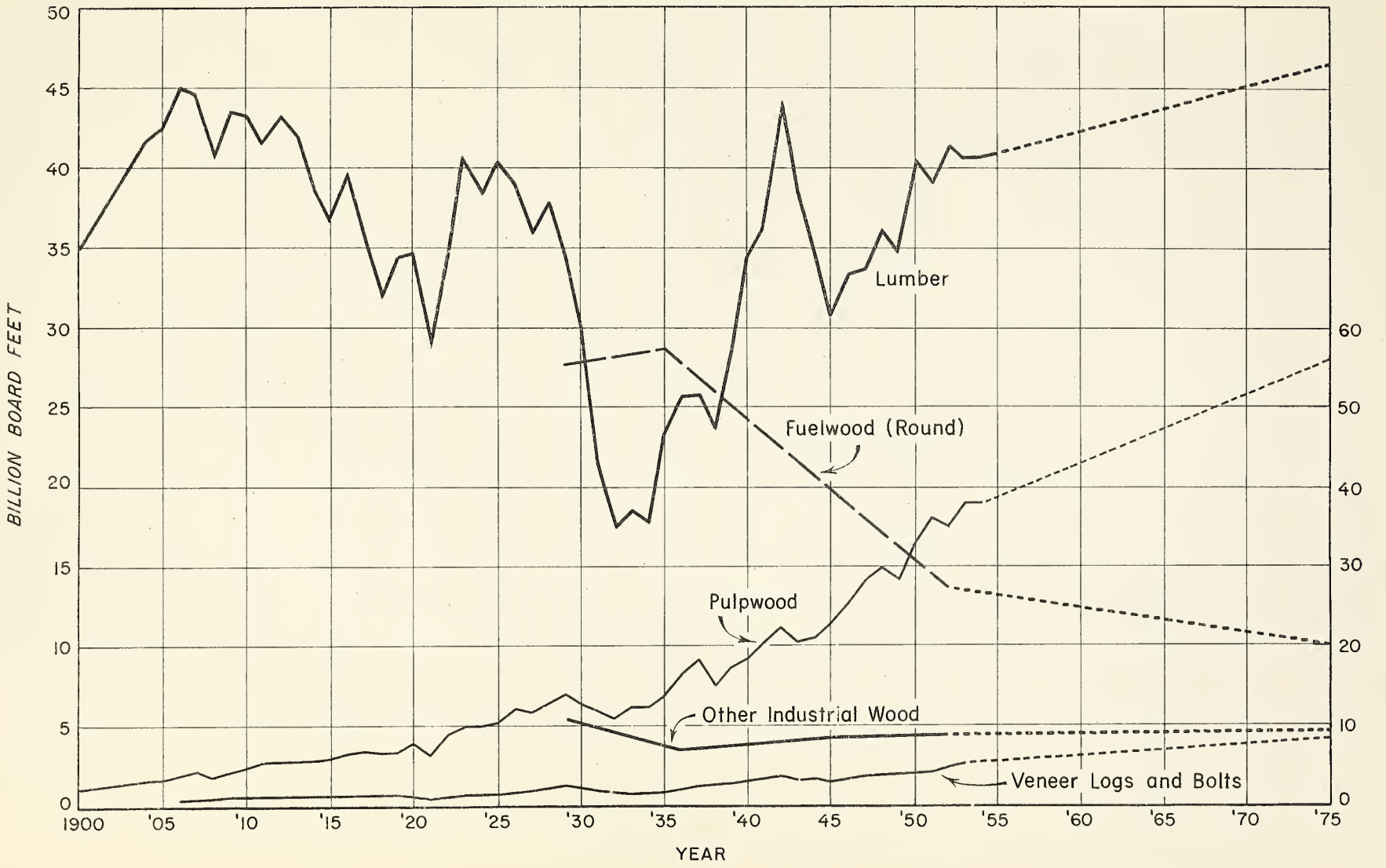
Since 1900 consumption of lumber per person has dropped from 539 board feet to 248 board feet. This has been caused largely by substitution of other materials for lumber in a number of uses. In the field of construction, where the greatest amount of lumber is used, lumber has been displaced to a certain extent by such products as steel, cinder block, plywood and building boards. Between 1939 and 1952, total construction activity increased by about 70 percent, but use of construction lumber increased only 35 percent compared with an increase of 100 percent for construction steel and cement, 200 percent for softwood plywood and more than 1,000 percent for building board. Use of lumber in fabricated products and shipping has also been reduced as a result of competition from paper and board, plywood, glass, metals, and other materials.

Construction accounts for about 75 percent of total lumber consumption

Construction has been the most important end-use for lumber (Chart 2) accounting for between 70 and 75 percent of total use. Current construction activity is at a record level with expenditures for construction in 1955 (in 1947-49 dollars) amounting to an estimated $33.7 billion - about 9 percent more than expenditures in 1954, as shown below.

Chart 1

CONSUMPTION AND POTENTIAL DEMAND FOR FOREST PRODUCTS IN THE UNITED STATES - 1900 - 1975



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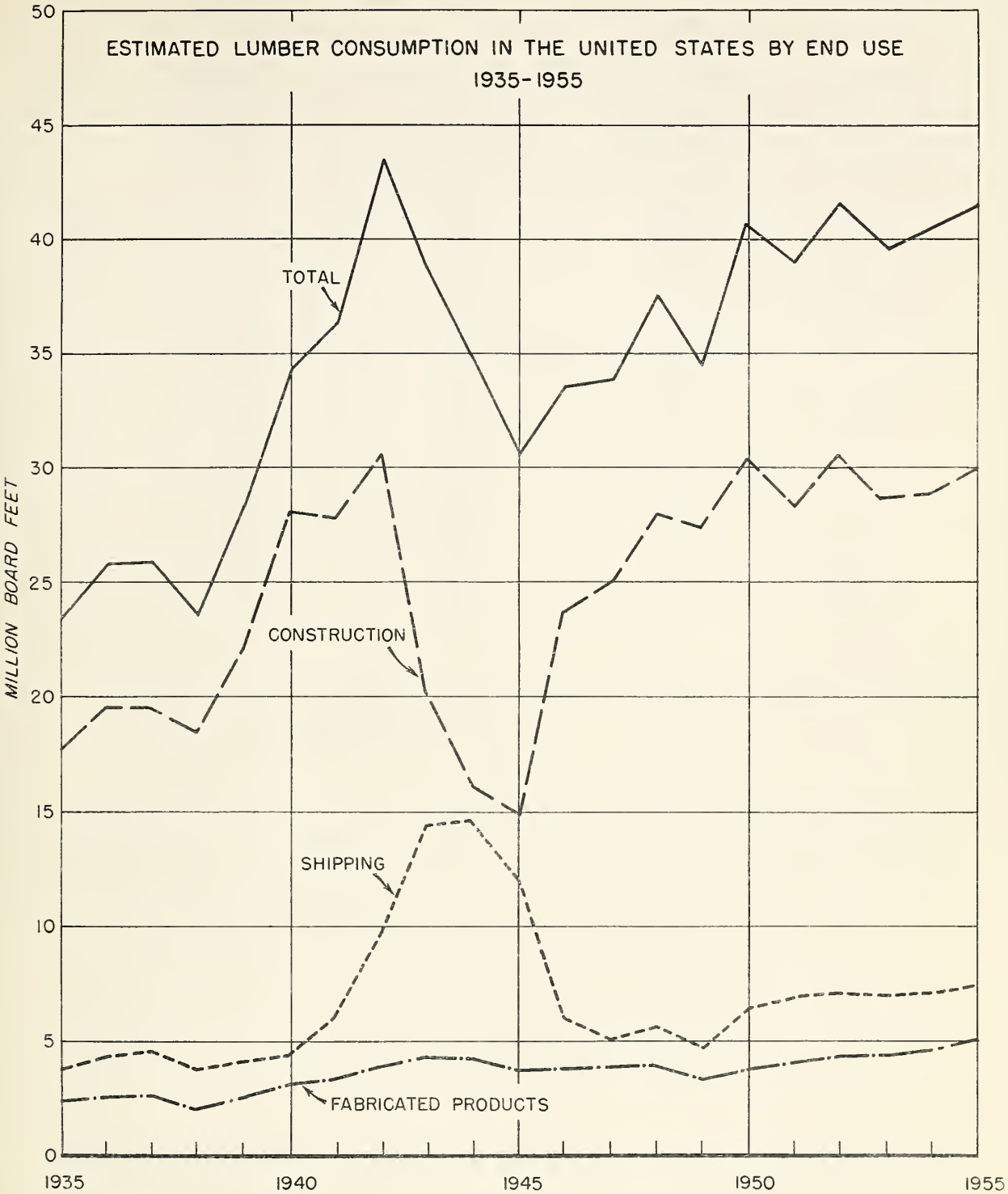

ESTIMATED LUMBER CONSUMPTION IN THE UNITED STATES BY END USE
1935-1955
MILLION BOARD FEET
50
45
40
35
30
25
20
15
10
5
0
1935
1940
1945
1950
1955
TOTAL
CONSTRUCTION
SHIPPING
FABRICATED PRODUCTS

Chart 2

Year	Total construction activity	New residential building construction activity	New non-residential building construction activity	All other new construction activity
		(Billions of Dollars)		
1939	16.2	5.6	4.0	6.6
1940	16.9	6.3	3.5	7.1
1941	21.8	7.2	6.0	8.6
1942	22.9	3.9	7.2	11.8
1943	12.8	2.7	3.6	6.5
1944	8.2	1.5	2.9	3.8
1945	8.4	1.7	3.1	3.6
1946	15.5	5.7	5.0	4.8
1947	17.8	6.9	4.0	6.9
1948	20.8	8.3	4.7	7.8
1949	22.2	8.5	5.1	8.6
1950	26.9	11.9	5.9	9.1
1951	27.0	10.0	7.5	9.5
1952	27.7	9.9	7.7	10.1
1953	28.9	10.3	8.2	10.4
1954	30.9	11.5	8.8	10.6
1955	33.7	12.7	10.0	11.0

Source: U. S. Department of Commerce, U. S. Department of Labor, CONSTRUCTION REVIEW.

In 1956 some further slight increase is expected in the volume of construction, although residential construction is expected to decline. During the next few years residential construction and lumber use may be somewhat lower than in 1955 because the formation of new households is expected to decline temporarily as a result of the low birthrates that prevailed in the depressed 1930's. Residential construction will tend to be maintained, however, by such factors as the continuing movement of city populations to the suburbs, current high birthrates which require larger houses, and increases in disposable income which will permit improvement in the general level of housing. Government policy to provide liberal credit or otherwise encourage housing construction is also likely to continue to be an important factor.

Looking further ahead to 1975 substantial increases are anticipated in residential construction. Demand for new dwelling units in 1975 may amount to 2.2 million units, or approximately a million units above the level of residential construction in 1955.

During 1956 lumber consumption in farm and railroad construction is expected to remain near the levels that have prevailed during the last several years. Lumber consumption in other types of construction such

as industrial, commercial, institutional, recreational, military and public utility is expected to increase slightly in 1956 in response to increased construction activity. By 1975 the potential demand for lumber of non-residential construction is expected to show further significant increases.

Lumber use in shipping and fabricated products also important

Between 15 and 20 percent of all the lumber consumed in the United States is used for shipment of agricultural and industrial commodities. Thus the quantity of lumber used in shipping is closely identified with the level of economic activity. It is assumed that in 1956 there will be some further increases in the production of goods in the United States, indicating a slight increase in lumber consumption for shipping.

By 1975 the demand for lumber in shipping is expected to decrease by about 7 percent to a level of 6.5 billion board feet.

The third major end-use for lumber is in fabricated products such as furniture, millwork and a wide variety of other items. Quantities of lumber consumed have varied considerably from year to year depending primarily on fluctuations in business activity. Over the years it is estimated that between 10 and 15 percent of total lumber consumption has been for fabricated products. As a result of the assumed decrease in the output of durable goods in 1956, a slight decline in lumber consumption from current levels is probable.

In 1975 the potential demand for lumber in fabricated products is expected to amount to about 6 billion board feet - 43 percent higher than at the present time. This primarily reflects the expected increase in population and high levels of future industrial activity. Increased furniture production to meet the needs of a rapidly expanding population will play a particularly important role in increasing demands for lumber in fabricated products.

For all lumber uses combined, it is expected that consumption in 1955 will amount to about 41 billion board feet. In 1956 consumption may drop slightly in response to an anticipated drop in residential construction. By 1975, potential demands for lumber in the United States may amount to at least 46 billion board feet - 12 percent above the level of consumption in 1955.

Domestic production supplies most lumber needs

Domestic lumber production accounts for about 96 percent of all the lumber consumed in the United States. In the period 1950 through 1954, for example, production averaged 38.4 billion board feet, compared with total imports of 2.9 billion board feet, and net imports of 2.2 billion board feet (Table 1). Softwood lumber from Canada has made up most of the lumber imports. Hardwood lumber from tropical countries, while highly important for some special uses, accounted for only a small part of total lumber imports.

Table 1

Lumber production, imports, exports, and consumption in the United States for selected years 1899-1955

Year	Domestic production	Imports	Exports	Stock changes	Apparent consumption
	Billion board feet				
1899	35.1	0.4	1.4	na	34.1
1905	43.5	0.7	1.8	na	42.4
1910	44.5	1.1	2.2	na	43.4
1915	37.0	0.9	1.3	na	36.6
1920	35.0	1.4	1.7	na	34.7
1925	41.0	1.8	2.6	na	40.2
1930	29.4	1.2	2.4	na	28.2
1931	20.0	0.7	1.7	na	19.0
1932	13.5	0.4	1.2	na	12.7
1933	17.2	0.4	1.3	na	16.3
1934	18.8	0.3	1.3	na	17.8
1935	22.9	0.4	1.3	-1.3	23.3
1936	27.6	0.7	1.3	1.3	25.7
1937	29.0	0.7	1.4	2.4	25.9
1938	24.8	0.5	1.0	0.7	23.6
1939	28.8	0.7	1.1	-	28.4
1940	31.2	0.7	1.0	-3.4	34.3
1941	36.5	1.4	0.7	1.0	36.2
1942	36.3	1.5	0.5	-6.5	43.8
1943	34.3	0.9	0.3	-3.9	38.8
1944	32.9	1.0	0.4	-1.1	34.6
1945	28.1	1.1	0.4	-1.8	30.6
1946	34.1	1.2	0.6	1.2	33.5
1947	35.4	1.3	1.4	1.5	33.8
1948	37.0	1.9	0.6	1.9	36.4
1949	32.2	1.6	0.7	-1.3	34.4
1950	38.0	3.4	0.5	0.2	40.7
1951	38.4	2.5	1.0	0.9	39.0
1952	39.5	2.5	0.7	-0.2	41.5
1953	38.7	2.8	.6	0.4	40.5
1954	37.5	3.1	.7	-0.6	40.5
1955	39.5	3.2	1.0	.7	41.0

na - Not available

Source: Bureau of the Census, U. S. Department of Commerce; Forest Service, U. S. Department of Agriculture; and National Retail Lumber Dealers Association.

Softwoods account for most lumber used

Softwoods have constituted about 80 percent of all lumber used in the United States. There is a considerable difference between the use of softwood and hardwood lumber in the major end-uses, however. Thus in the period 1947 through 1952, softwood lumber accounted for 91 percent of the lumber used in construction, but only 68 percent of lumber used in shipping and 31 percent of the lumber used in fabricated products.

While softwood lumber is preferred for construction purposes and hardwood lumber for manufactured products, there are some fields of use in which either hardwood or softwood lumber can be utilized. Because a greater price increase is anticipated for softwood lumber, it is expected that by 1975 hardwood lumber may replace softwood to some extent.

More than half the lumber now produced in the West[1/]

Lumber production in the West has increased from 3.5 billion board feet in 1900 to an estimated 20.0 billion board feet in 1955 (Table 2, Chart 3). The present western cut amounts to more than half of all the lumber produced in the United States. It includes nearly two-thirds of the softwood lumber.

The West is expected to continue to be the most important region of lumber production for some time because of its relatively great wealth of standing saw timber (Chart 4). Altogether this region contains about 1,345 billion board feet of saw timber, or about two-thirds of the nation's total supply. In terms of softwoods, which account for about 80 percent of the lumber used in the country, the West is in an even better position with 80 percent of the softwood saw timber. Most of this volume moreover, is old-growth timber of relatively high quality.

At the present time the cut in the West is far in excess of growth (Chart 5). This can be expected to continue until most of the old-growth areas are harvested and new second-growth forests predominate. As the backlog of old-growth timber is cut, it is inevitable that the relative importance of the West as a lumber producing region will decline. Commercial forest lands in the West make up only 24 percent of the nation's timber growing area.

Lumber production in the South has declined since 1910 when a peak of about 20 billion board feet was reached.(Table 2, Chart 6). Since 1940, however, practically no change has occured in total lumber

1/ The West includes the eleven western states and South Dakota. The South includes the twelve most southern states including Virginia. The North includes all other states.

Table 2

Estimated lumber production in the United States by regions, and by hardwoods and softwoods, selected years 1899-1955

Year	All regions			North			South			West
	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	Total 1/
	Billion board feet									
1899:	35.1	8.9	26.2	18.6	6.6	12.0	12.9	2.3	10.7	3.5
1905:	43.5	10.5	33.0	20.1	7.3	12.8	16.5	3.3	13.3	6.9
1910:	44.5	10.5	34.0	15.6	7.5	8.0	20.0	2.9	17.1	8.9
1915:	37.0	7.5	29.5	10.0	4.7	5.3	18.8	2.8	16.0	8.2
1920:	35.0	7.4	27.6	6.9	3.8	3.0	16.0	3.5	12.5	12.1
1925:	41.0	7.7	33.3	6.0	3.6	2.5	19.6	4.1	15.5	15.3
1930:	29.4	6.1	23.3	4.5	2.9	1.6	12.6	3.2	9.4	12.2
1935:	22.9	4.7	18.2	3.8	2.4	1.5	10.0	2.3	7.7	9.1
1940:	31.2	5.5	25.7	4.6	2.9	1.7	13.3	2.6	10.7	13.2
1941:	36.5	6.6	29.9	5.3	3.3	2.0	15.5	3.3	12.2	15.7
1942:	36.3	6.8	29.5	5.1	3.2	2.0	15.6	3.6	12.0	15.6
1943:	34.3	7.4	26.9	4.9	3.2	1.7	14.3	4.2	10.2	15.0
1944:	32.9	7.8	25.2	5.4	3.5	1.9	12.6	4.3	8.3	15.0
1945:	28.1	7.0	21.2	4.5	2.8	1.7	11.5	4.1	7.4	12.1
1946:	34.1	8.3	25.9	4.9	3.1	1.9	14.7	5.1	9.6	14.4
1947:	35.4	7.4	28.0	5.4	3.4	2.0	13.6	4.0	9.6	16.3
1948:	37.0	7.4	29.6	6.0	3.4	2.6	13.2	4.0	9.2	17.8
1949:	32.2	5.7	26.5	4.1	2.6	1.5	11.6	3.1	8.5	16.5
1950:	38.0	7.4	30.7	4.9	3.0	2.0	14.6	4.4	10.2	18.6
*1951:	38.4	8.0	30.4	5.2	3.2	2.0	14.0	4.8	9.2	19.3
*1952:	39.5	8.0	31.4	5.3	3.4	1.9	14.2	4.5	9.7	19.9
*1953:	39.0	8.0	31.0	5.2	3.2	2.0	13.8	4.8	9.0	20.0
*1954:	37.5	7.8	29.7	5.1	3.1	2.0	13.5	4.7	8.8	19.0
*1955:	39.5	8.0	32.0	5.2	3.2	2.0	14.3	4.8	9.5	20.0

* Estimated. Subject to revision

Note: Data may not add to total because of rounding.

1/ Practically all softwoods.

Source: Bureau of the Census, U. S. Dept. of Commerce, and Forest Service, U. S. Dept. of Agriculture

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Chart 3

Lumber and Pulpwood Production in the West
Selected Years, 1900 - 1955

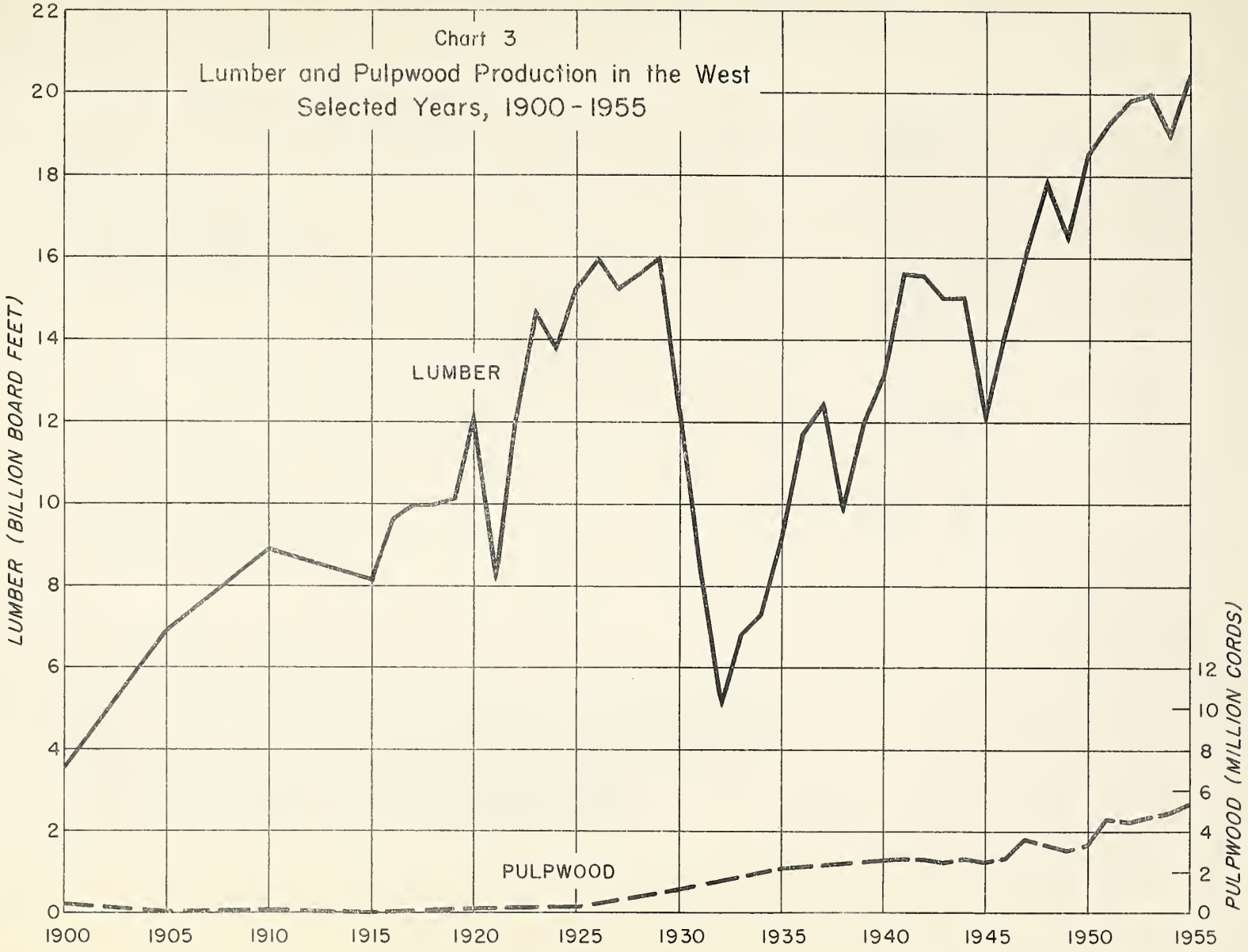


Chart 4

Distribution of Commercial Forest Land, Sawtimber Volume, and Growing Stock Volume by Region 1952

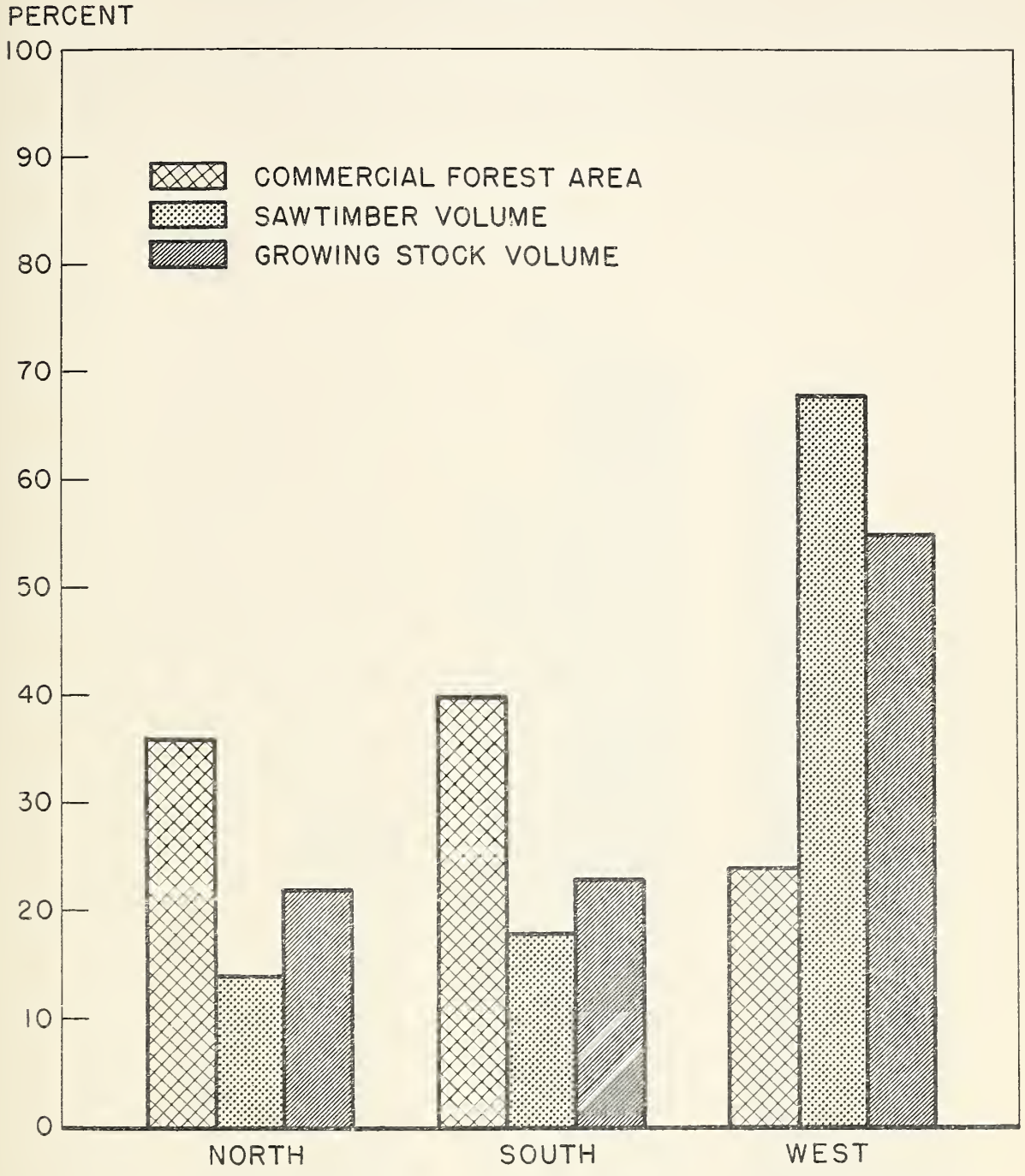


Chart 5

Comparison of Net Annual Live Sawtimber Growth with Timber Cut by Regions and by Hardwoods and Softwoods, 1952.

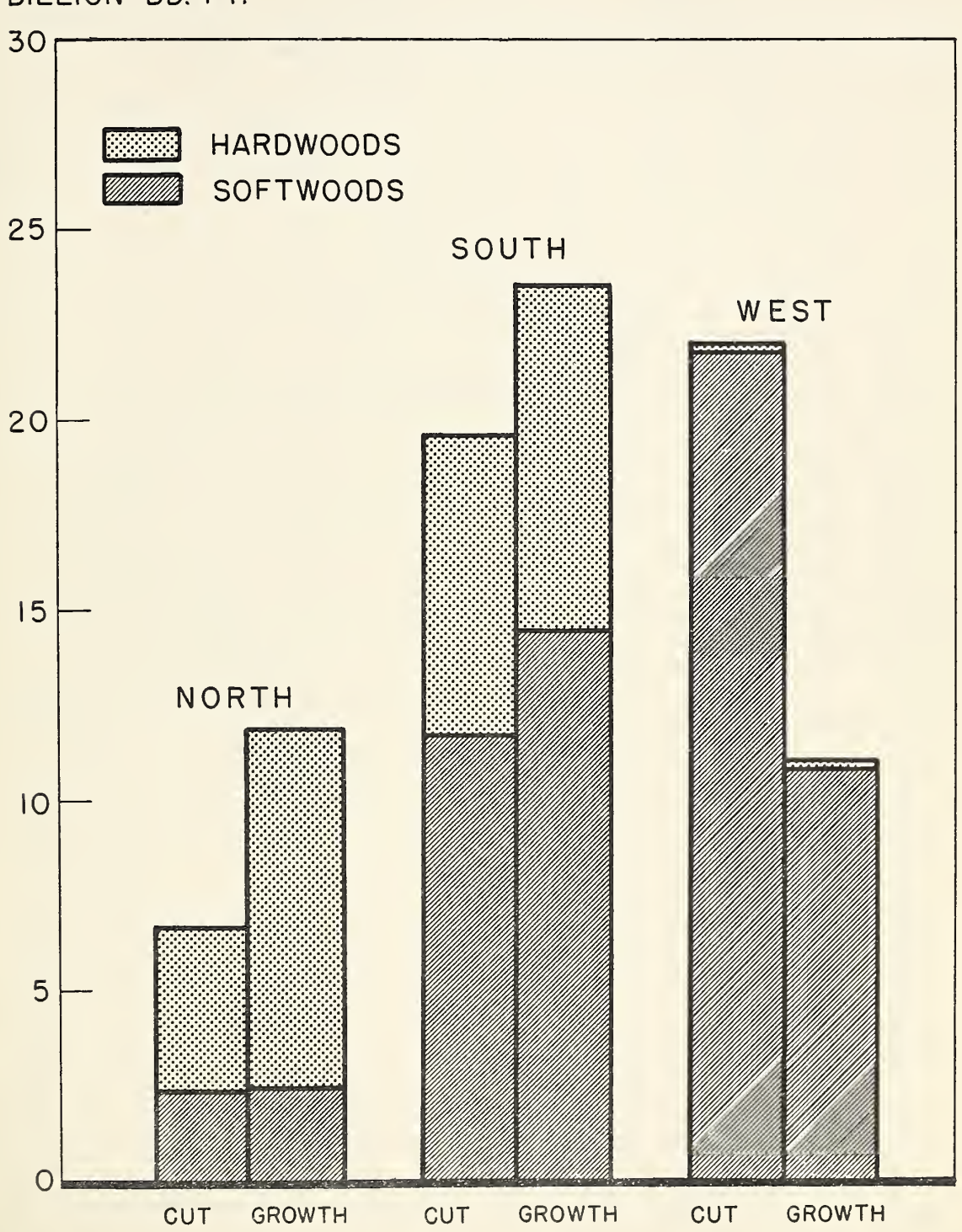
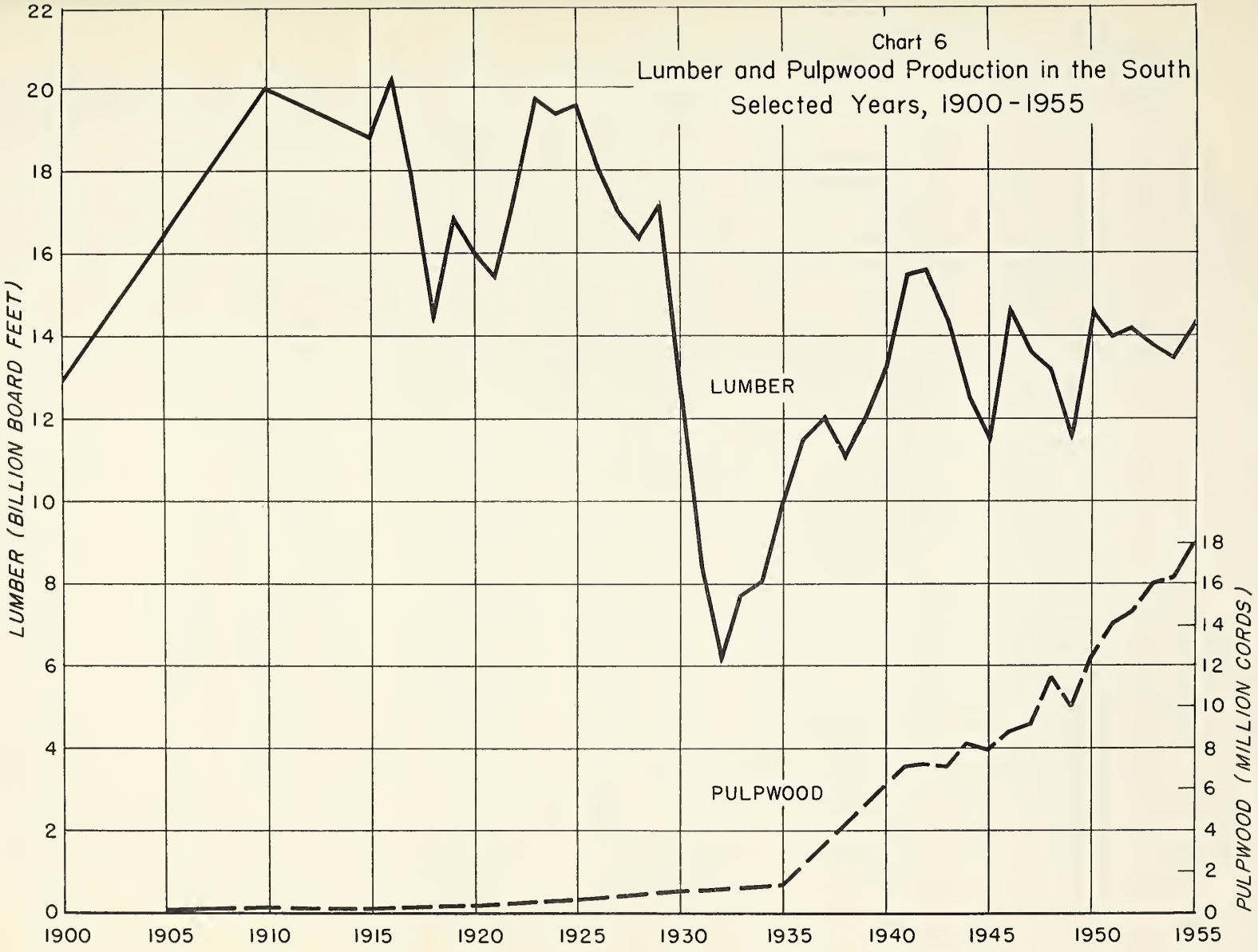


Chart 6

Lumber and Pulpwood Production in the South

Selected Years, 1900 - 1955



production in this region, although the softwood cut has dropped while output of hardwood lumber has increased. The estimated 14.3 billion board feet expected in 1955 is about average for this period.

Because of increasing problems of saw timber supply and increasing competition from the pulp industry for wood, lumber production in the South, in the immediate future, may decline somewhat below the current level.

The South is potentially one of the most productive forest regions in the United States. The region contains about 40 percent of the nation's commercial forest land and growth rates are relatively high. At the present time this region has only 22 percent of the nation's growing stock and 17 percent of the saw timber (Chart 4). Currently growth exceeds cut for both saw timber and growing stock (Chart 5). As forestry programs are further intensified this region should furnish an increasing part of the lumber cut in the United States.

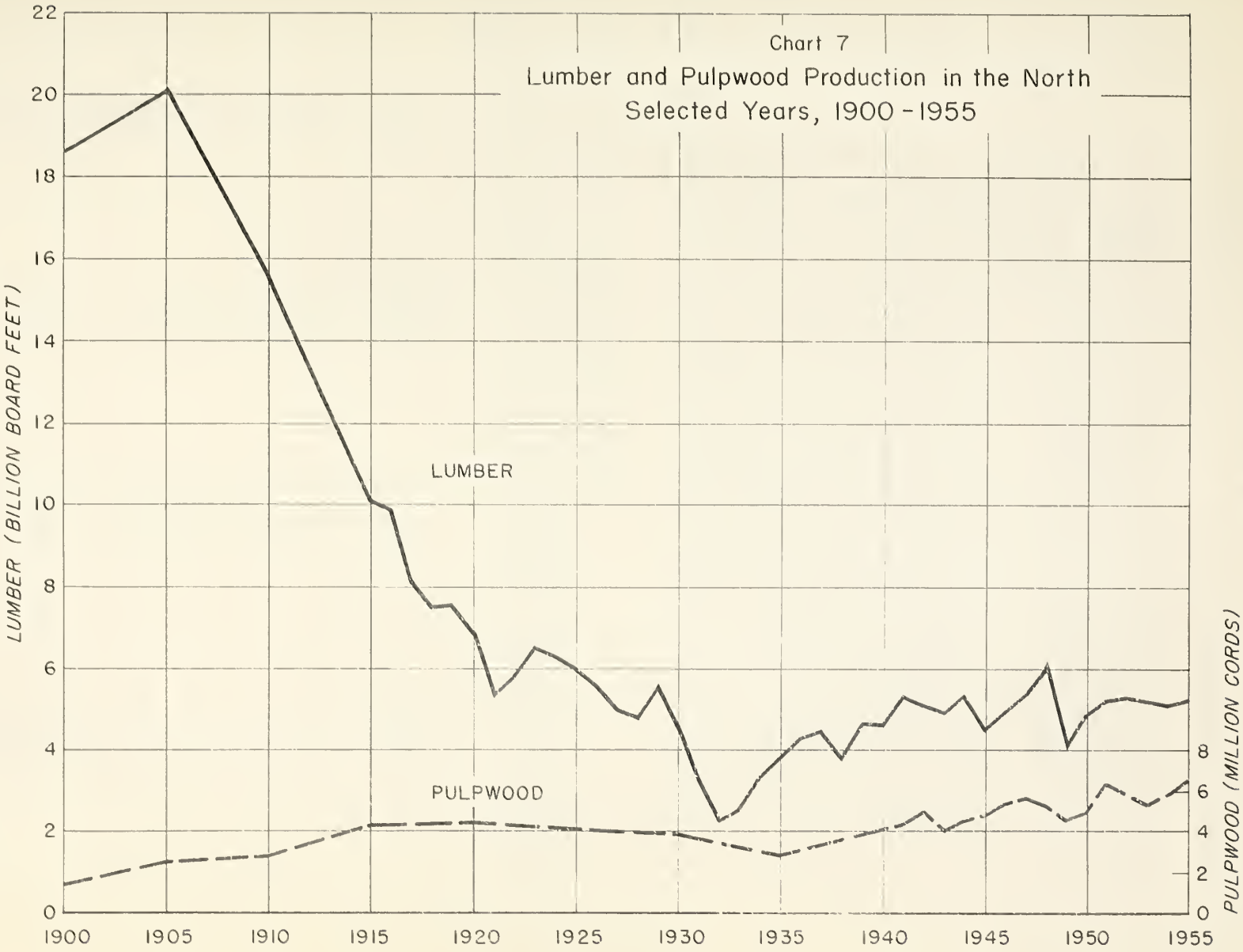
While the comparison between growth and cut in the South is favorable after many years of declining volumes, the quality of timber in this region is still declining. The drop in quality of southern pine lumber, for example, has been a major reason for the increased acceptance of western lumber in eastern markets during recent years. The favorable balance of growth also is at a level substantially below that required to meet future potential demands.

Fifty years ago the North provided half of all the lumber produced in the United States (Table 2, Chart 7) but after the peak in 1905, lumber production declined sharply to a low of less than 4 billion board feet in the 1930's. Since the mid-1930's, however, lumber production in the North has shown a moderate increase and in 1955 is expected to total 5.2 billion board feet.

The North contains 22 percent of the nation's growing stock and 13 percent of the saw timber, mainly hardwoods (Chart 4). Timber growth exceeds cut for both growing stock and saw timber (Chart 5) but as in the South average timber quality is low and growth is far below potential yields. This region contains 36 percent of the nation's commercial forest area and if forestry programs are intensified in the future, it can supply an increasing proportion of the nation's hardwood lumber production.

Lumber prices at an all-time peak

Between January and September 1955 the wholesale price index of lumber increased by about 6 percent from 120.0 to 127.1. This is slightly above the previous all-time peak of 126.7 reached in March 1951. Little change in prices is expected in 1956.


Chart 7
Lumber and Pulpwood Production in the North
Selected Years, 1900 - 1955
LUMBER (BILLION BOARD FEET)
PULPWOOD (MILLION CORDS)
LUMBER
PULPWOOD
0
2
4
6
8
10
12
14
16
18
20
22
1900
1905
1910
1915
1920
1925
1930
1935
1940
1945
1950
1955

During the period 1926 through September 1955, wholesale lumber prices increased 283 percent, climbing from an index of 33.2 in 1926 to 127.1 (Chart 8). Prices of all commodities on the other hand increased by only 72 percent during this period. In the last 4 or 5 years, however, the wholesale price index for both lumber and all commodities has shown little change.

The rise in lumber price that has occurred since 1926 has resulted from a number of factors. Wage rates, for example, have increased more rapidly in the lumber industry than in many other industries. With the diminishing availability of accessible timber of desirable market quality it has been necessary to utilize smaller and poorer quality trees which require more man-hours and equipment time per unit of lumber produced. It has also been necessary to shift logging operations into more remote regions with difficult terrain, with constant increases in logging costs. Rising values for standing timber also have been reflected in the higher lumber prices. As the lumber producing regions have become more remote from the major consuming areas transportation costs have materially added to the delivered price of lumber.

Stumpage prices also show large increase

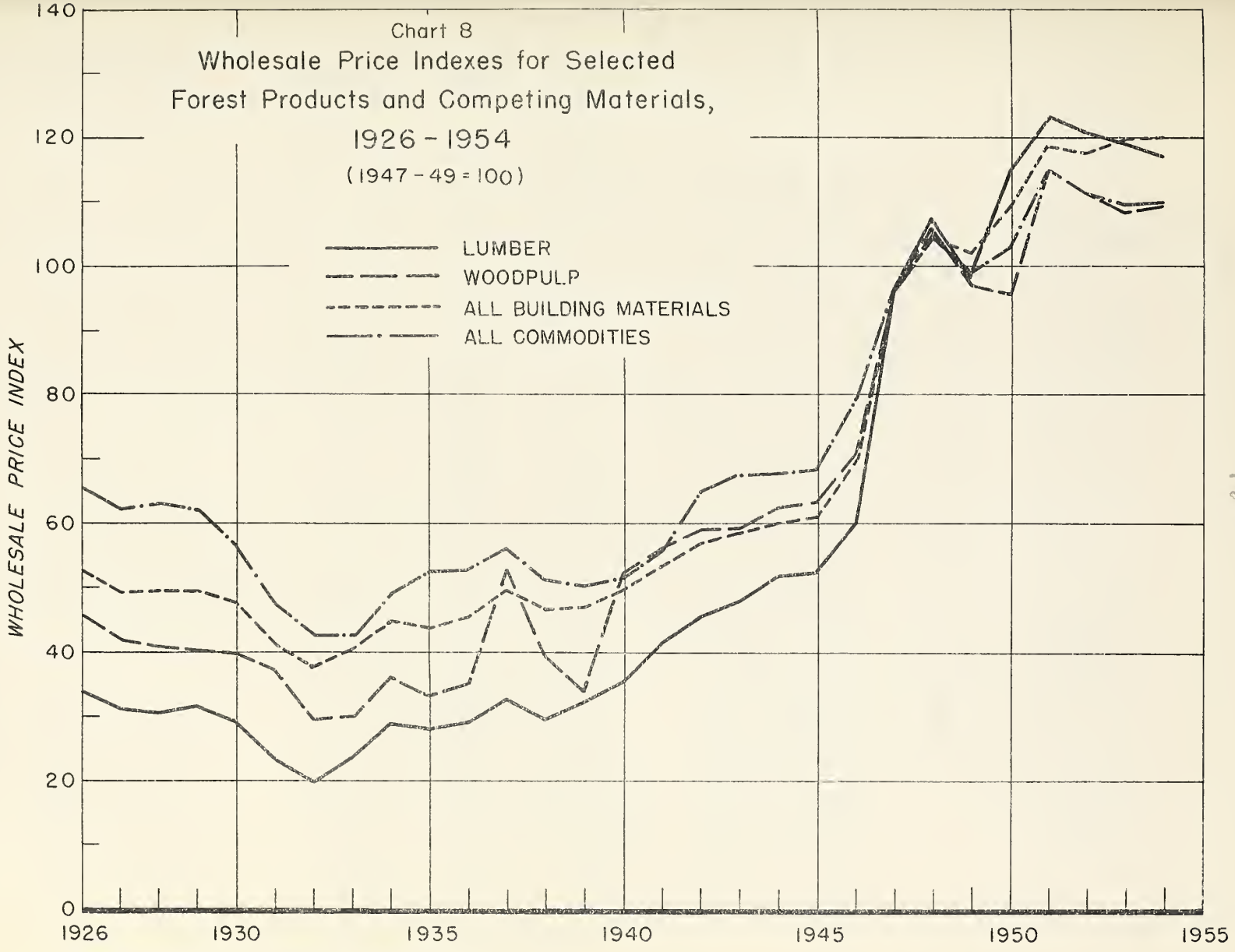
Stumpage prices have followed a rising trend similar to the wholesale price index of lumber, as shown in the following tabulation of average stumpage prices per thousand board feet for sales of national forest timber:

Fiscal year	Average stumpage prices	Fiscal year	Average stumpage prices
1926	$2.83	1941	$ 2.79
1927	2.85	1942	2.78
1928	2.74	1943	3.67
1929	2.87	1944	4.25
1930	2.91	1945	4.14
1931	2.75	1946	4.21
1932	2.44	1947	4.28
1933	2.15	1948	5.60
1934	2.33	1949	7.69
1935	2.57	1950	8.77
1936	2.60	1951	10.20
1937	2.49	1952	13.43
1938	2.50	1953	13.68
1939	2.62	1954	12.18
1940	2.76	1955	11.18

Chart 8

Wholesale Price Indexes for Selected Forest Products and Competing Materials, 1926 - 1954

(1947 - 49 = 100)



SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

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This rapid rise in stumpage values has largely been the result of increasingly keen competition for available supplies of standing timber. Stumpage prices for given tracts of timber vary widely in the United States depending upon species, quality, volume per acre and other factors.

The Demand and Price Outlook for Pulpwood

Consumption rising rapidly

During the first half of 1955 pulpwood consumption was 15 percent above the corresponding period in 1954 as a result of unprecedented business activity and a resulting high level of demand for paper and board. Total consumption in 1955 is estimated at 33 million cords, or 13 percent above the consumption of 29.2 million cords in 1954, and 95 percent above consumption in 1945. This estimate, however, does not include the equivalent of about 10 million cords of pulpwood imported in 1955 in the form of woodpulp, paper and board.

In 1956 some further increase is expected in pulpwood consumption in response to a further rise in demand for paper and board resulting from continued growth of population and Gross National Product and continuing development of new uses for paper and paper products.

The pulp and paper industry has shown phenomenal growth in the past three and a half decades with pulpwood consumption rising from about 6 million cords in 1920 to 33 million cords in 1955 (Table 3).

It is estimated that by 1975, the potential demand for pulpwood will reach at least 56 million cords. It has been assumed in this estimate that there will be a considerable shift towards the use of high-yielding dense hardwoods, greater use of waste paper, and increased use of high yielding pulp processes.

U. S. increasingly self-sufficient in pulpwood

Domestic forests are being called upon to supply pulpwood for most of the rising demands for pulp and paper. In 1955, for example, pulpwood production from domestic forests is estimated at 30 million cords and net imports from Canada at 2 million cords (Table 3). In 1900, on the other hand, pulpwood imports accounted for about 20 percent of the pulpwood used by U. S. mills. Pulpwood production in the United States has now reached a point where it is equivalent in volume to 38 percent of the logs cut for lumber.

Domestic pulpwood consumed in 1955 - 31 million cords including 1 million cords from stocks - represented 94 percent of the total consumption of 33 million cords in U. S. pulp mills, and 72 percent of

Table 3

Production, net imports, and apparent consumption of pulpwood, wood pulp, and paper and board in the United States, for selected years 1899-1955

Year	Pulpwood			Wood pulp			Paper and board		
	Production	Net imports	Apparent consumption 1/	Production	Net imports	Apparent consumption	Production	Net imports	Apparent consumption
	(Million cords)			(Million short tons)					
1899	1.6	.4	2.0	1.2	--	1.2	2.2	--	2.2
1904	2.5	.6	3.1	1.9	.2	2.1	3.1	--	3.1
1909	3.2	.8	4.0	2.5	.4	2.9	4.1	--	4.1
1914	3.6	.8	4.5	2.9	.7	3.6	5.2	.2	5.4
1920	5.0	1.1	6.1	3.8	.9	4.7	7.2	.5	7.7
1925	5.0	1.1	6.1	4.0	1.6	5.6	9.0	1.4	10.4
1930	6.1	1.1	7.2	4.6	1.8	6.4	10.2	2.1	12.3
1935	6.6	1.0	7.6	4.9	1.8	6.7	10.5	2.3	12.7
1941	14.2	2.2	16.6	10.4	.8	11.2	17.8	2.7	20.4
1942	14.9	2.2	17.3	10.8	.9	11.6	17.1	2.7	19.8
1943	13.6	1.7	15.6	9.7	1.0	10.7	17.0	2.4	19.4
1944	15.3	1.6	16.8	10.1	.9	11.0	17.2	2.3	19.4
1945	15.3	1.7	16.9	10.2	1.6	11.8	17.4	2.3	19.7
1946	17.0	1.9	17.8	10.6	1.8	12.4	19.3	3.2	22.5
1947	18.5	2.0	19.7	11.9	2.2	14.1	21.1	3.6	24.8
1948	20.0	2.3	21.2	12.9	2.1	15.0	21.9	4.2	26.1
1949	17.6	1.6	19.9	12.2	1.6	13.8	20.3	4.4	24.7
1950	20.7	1.8	23.6	14.8	2.3	17.1	24.4	4.6	29.0
1951	25.1	2.6	26.5	16.5	2.2	18.7	26.0	4.5	30.6
1952	25.1	2.3	26.5	16.5	1.7	18.2	24.4	4.6	29.0
1953	26.3	1.5	28.1	17.5	2.0	19.5	26.5	4.8	31.3
1954	27.0	1.6	29.2	18.3	1.6	19.9	26.7	4.5	31.2
*1955	30.0	2.0	33.0	20.5	2.0	22.5	30.2	4.5	34.7

* Estimated. Subject to revision.
Note: Data do not necessarily add to total because of rounding.
1/ Includes changes in stocks for all years 1941 through 1955.

Source: Bureau of the Census, U. S. Dept. of Commerce, and Forest Service, U. S. Dept. of Agriculture

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the 43 million cords required for both domestically produced and imported pulp, paper and board. By 1975, it is estimated that net imports of pulpwood will show little change and that the equivalent of 12 million cords of pulpwood may be imported in the form of wood-pulp and paper. Thus pulpwood demands on domestic forests in 1975 may amount to at least 42 million cords or 40 percent more than the current pulpwood cut.

Softwoods preferred for pulpwood

Southern pine, western hemlock, Douglas-fir, spruce and true firs are most in demand for pulpwood and these species have long been the principal source of pulpwood used for pulp and paper manufacture in this country and in Canada. It is estimated that softwoods make up about 81 percent of the current pulpwood cut. In the South, softwoods comprise about 84 percent of the total cut, in the North 58 percent and the West almost 100 percent of the total. Softwoods are generally preferred over hardwoods for pulping because of longer fiber length and greater strength for pulp and paper.

Consumption of hardwoods has been expanding, however, as a result of declining supplies of softwood timber and development of more efficient pulping processes. This has been particularly true in the North where the stands of preferred spruce and fir have not been adequate to meet expanding demands of the pulp industry. Although the proportion of hardwood pulpwood to softwood pulpwood has not changed appreciably for many years, production has risen from about 0.8 million cords in 1920 to 5.7 million cords in 1955. A future trend towards the use of more hardwood is expected as a result of the new pulping processes suitable for hardwoods, the higher yields obtainable per cord of wood and increasing competition for the available softwood timber supplies.

Pulpwood production concentrated in the South

Pulpwood production in the South has increased rapidly from about 1 million cords in 1930 to an estimated 18.1 million cords in 1955 (Table 4, Chart 6). This present cut of pulpwood is equivalent to nearly two-thirds the volume of sawlogs produced in this region, and about one-third of the total timber cut for all products including fuelwood. To an increasing extent the same sizes and species of timber are utilized for sawlogs and pulpwood in the South.

The rapid growth of the pulp and paper industry in the South and expected future expansion are based upon a number of favorable factors. These include good location with respect to markets; reasonable security of future raw material supplies based upon rapid tree growth; ample supplies of labor, year-long woods work and comparatively easy logging conditions; availability of water, chemicals and power; and excellent transportation facilities for both pulpwood and finished products.

Table 4

Estimated pulpwood production in the United States by regions, and by hardwoods and softwoods, selected years 1899-1955

Year	All Regions			North			South			West
	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	Total 1/
	Million Cords									
1899	1.6	.5	1.2	1.4	.5	1.0	--	--	--	.2
1905	2.5	.4	2.1	2.5	.4	2.1	.1	--	.1	--
1910	3.1	.8	2.3	2.8	.7	2.1	.3	.1	.1	.1
1916	4.4	.7	3.7	4.2	.6	3.6	.2	.2	.1	--
1920	5.0	.8	4.3	4.5	.5	4.0	.4	.3	.1	.2
1925	5.0	.7	4.3	4.1	.4	3.7	.6	.3	.3	.3
1930	6.1	.8	5.3	3.9	.4	3.5	1.0	.4	.5	1.2
1935	6.6	.9	5.7	2.9	.3	2.6	1.4	.6	.9	2.2
1941	14.2	1.8	12.3	4.4	1.1	3.3	7.2	.7	6.4	2.6
1942	14.9	1.9	13.0	5.0	1.2	3.8	7.3	.7	6.6	2.6
1943	13.6	1.8	11.8	4.0	1.1	2.9	7.1	.7	6.5	2.5
1944	15.3	2.0	13.4	4.6	1.0	3.5	8.2	1.0	7.2	2.6
1945	15.3	2.1	13.1	4.9	1.1	3.8	7.9	1.0	6.8	2.5
1946	17.0	2.6	14.4	5.5	1.3	4.2	8.8	1.2	7.6	2.6
1947	18.5	2.5	16.0	5.7	1.4	4.3	9.2	1.2	8.1	3.6
1948	20.0	2.5	17.5	5.4	1.2	4.2	11.4	1.3	10.1	3.3
1949	17.6	2.3	15.3	4.6	1.3	3.3	9.9	1.0	9.0	3.1
1950	20.7	2.9	17.8	5.0	1.7	3.3	12.4	1.3	11.2	3.3
1951	25.1	3.8	21.3	6.4	2.2	4.2	14.1	1.6	12.4	4.7
1952	25.1	3.7	21.4	5.9	1.9	4.0	14.7	1.7	13.0	4.5
1953	26.3	4.4	21.9	5.4	2.4	3.0	16.1	2.0	14.1	4.7
1954	27.0	4.8	22.2	5.8	2.5	3.3	16.3	2.2	14.1	4.9
*1955	30.0	5.7	24.3	6.6	2.8	3.8	18.1	2.9	15.2	5.3

* Estimated. Subject to revision.

Note: Data may not add to totals because of rounding.

1/ Practically all softwoods.

Source: Bureau of the Census, U. S. Dept. of Commerce, and Forest Service, U. S. Dept. of Agriculture

Considerable competition has developed between pulp mills and between pulp mills and sawmills for the available supply of softwood timber in many parts of the South. Yet further expansion of the southern pulp industry is to be expected because of such factors as strong bargaining power, ability to use small size low grade material, and the increasing number of smaller sized trees in southern forests.

Pulpwood production in the West increased from about 0.3 million cords in 1925 to an estimated 5.3 million cords in 1955, including about 2 million cords of plant residues (Table 4, Chart 3). Further increases in production in this region are also expected. Western forests, although amounting to less than one-fourth of the total commercial forest area, contain about one-half of the cubic volume of timber in the United States (Chart 4). This region also has large quantities of unused plant residues suitable for pulp manufacture.

Pulpwood production in the North is not expected to change much from present levels in the near future, although production of hardwood pulpwood is expected to increase while softwood pulpwood may decline. Fifty years ago, the North supplied nearly all of the pulpwood produced in the United States and as late as the early 1930's supplied more than half of the cut (Table 4, Chart 7). Since then production has increased slowly and the region has declined in importance as a producing region. This has resulted from local depletion of softwood timber resources with consequent high costs of raw materials, strong competition from other regions, and local problems such as stream pollution. There are increasingly large volumes of second-growth hardwood timber in this region which can support substantial increases in output.

Pulpwood prices stable in recent years

Pulpwood prices show a considerable amount of variation in the different regions, depending upon species, local timber supplies and other factors. In the Lake States the price of rough pulpwood f.c.b. cars averages about $23.75 per cord for spruce, $16.00 for pine and $10.50 for aspen and northern hardwoods. In the Northeast, prices f.o.b. car average about $18.50 per cord for spruce and fir and $14.00 for pine, aspen and mixed hardwoods. In the South, prices per rough cord f.o.b. car average about $13.65 for pine and $12.85 for hardwoods. Supplies of pulpwood seem ample to meet anticipated demands in 1956 and no substantial changes in prices are expected.

Since the 1930's, pulpwood prices have advanced rapidly. Prices for southern pine pulpwood, for example, increased from $3.60 per cord in 1938 to $13.80 as of September, 1955 as shown in the following tabulation:2/

2/ Prices shown in this tabulation represent the weighted average of all rough pine pulpwood loaded on railroad cars, delivered to barge landings or trucked to pulp mills in the Southeast.

Year	Average price	Year	Average price
1938	$ 3.60	1947	$ 10.95
1939	3.90	1948	11.70
1940	4.15	1949	11.00
1941	4.60	1950	11.90
1942	6.00	1951	13.85
1943	7.25	1952	13.90
1944	8.20	1953	13.80
1945	8.45	1954	13.75
1946	10.10	Sept. 1, 1955	13.80

The Demand and Price Outlook for Veneer Logs and Bolts

Veneer log consumption rising rapidly

Consumption of veneer logs and bolts in the United States has risen from 0.7 billion board feet in 1925 to 3.0 billion board feet in 1955 - an increase of 329 percent (Chart 9). Most of this increase has been in consumption of softwood veneer logs which rose from 0.2 billion board feet in 1925 to an estimated 2.0 billion board feet in 1955. Consumption of hardwood veneer logs during this same period increased from 0.5 billion board feet to about 1 billion board feet.

In 1956 veneer log consumption is expected to increase slightly with most of the expected increase in softwood veneer logs and bolts. This reflects an anticipated rise in the use of softwood plywood both in construction - the use which accounted for most of the rapid increase in consumption after 1925 - and in shipping and fabricated products.

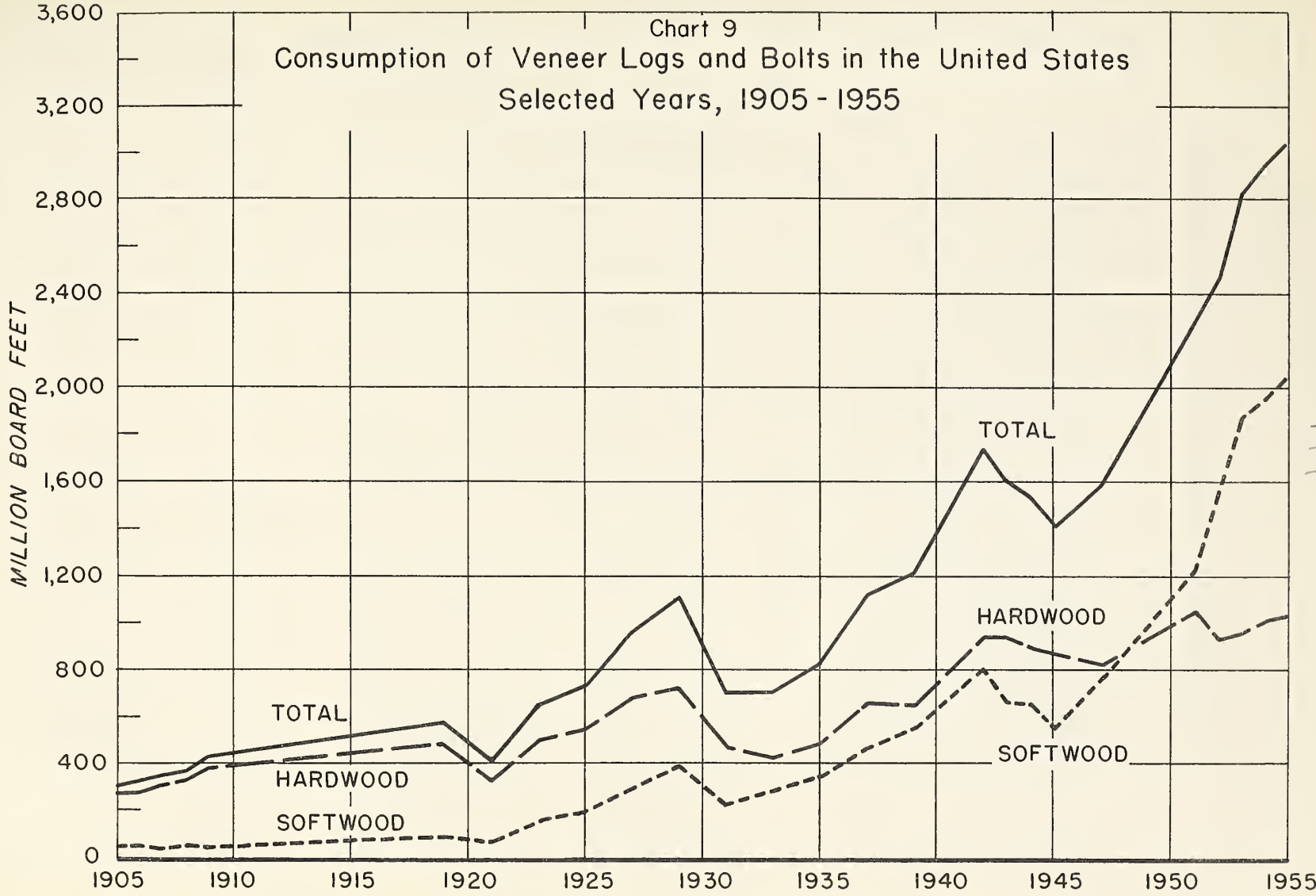
Almost all of the softwood veneer logs are produced in the West while the hardwoods are produced in both the South and the North. Limited quantities of veneer logs, chiefly specialty hardwoods, are imported into the United States.

By 1975 substantial increases are expected in the demand for both softwood and hardwood veneer logs. Potential demands in 1975 at prices somewhat above current levels, are estimated at 2.7 billion board feet for softwood and 1.8 billion board feet for hardwood veneer logs. The total anticipated demand of 4.5 billion board feet represents an increase of 50 percent over the 1955 level of consumption. Most of the anticipated increase is based on greater use of softwood plywood in construction.

Veneer log prices, both for softwoods and hardwoods, have risen rapidly and the general trend of prices is likely to continue upward, primarily because of a growing scarcity of the high quality timber demanded for veneer and plywood.

Chart 9

Consumption of Veneer Logs and Bolts in the United States
Selected Years, 1905 - 1955



1961

Demand and Price Outlook for Other Timber Products

Fuelwood consumption declining

Consumption of fuelwood for domestic use in 1955 is estimated at about 25 million cords of roundwood, plus an additional 27 million cords of plant residues. Fuelwood consumption in 1955 represents less than half of that prevailing 25 years ago as a result of widespread substitution of more convenient fuels such as coal, oil, gas and electricity. Further declines in the use of fuelwood is expected. By 1975 total consumption of fuelwood for domestic and industrial purposes is estimated at about 40 million cords including only 20 million cords of roundwood. Since a substantial part of the roundwood cut consists of dead and cull trees it is estimated that no more than 10 million cords may be drawn from timber growing stock.

Consumption of other products show variable trends

Mine timbers - An estimated 90 million cubic feet of round, split and hewn mine timbers are currently used in mines of the United States. This is only about half the level of use in the 1920's. The decline in use primarily is a result of substitution of sawn timbers, greater use of steel, and changes in mining practices. In view of expected increases in coal and ore production some slight increase in the use of mine timbers is expected in the future.

Cooperage logs - About 350 million board feet of logs and bolts were used by the cooperage industry in 1955; little change is expected in 1956. Use of wood for cooperage has declined greatly during the past three decades as a result of the substitution of steel and fiber containers, changes in methods of merchandising, and the decreasing availability of high quality cooperage timber. It is anticipated that markets for white oak cooperage for whiskey barrels will remain firm, but the future of cooperage for other purposes does not appear bright.

Hewn ties - About 4 million hewn ties, representing about 12 percent of the total number of cross ties installed, are currently used by railroads in the United States. Hewn ties are produced chiefly in the South of southern yellow pine and oak timber. The 1955 level of hewn tie consumption represents only about one-tenth of the level which prevailed during the 1920's, due primarily to substitution of sawn for hewn ties. A general downward trend in consumption of hewn ties and a continued shift to sawn ties is expected. Thus, by 1975 it is estimated that consumption may amount to no more than about 3 million ties per year.

Poles and piling - About 6 million utility poles and 40 million linear feet of piling are currently used in the United States. No significant change in consumption is expected in the near future, although by 1975 demands for poles are expected to drop somewhat.

Miscellaneous products - Current consumption of a variety of minor products such as shingle logs, turnery logs and bolts, small dimension stock, distillation wood, farm timbers, and other miscellaneous products amounts to about 250 million cubic feet of wood annually. No change in consumption seems likely in 1956, although use of such products by 1975 is expected to increase somewhat.

Domestic Consumption Rising. Domestic consumption of both rosin and turpentine in the crop year beginning April 1, 1955 is expected to exceed that of a year earlier. (See table 5 and chart 10.) Rosin should be at least 11 percent higher and turpentine about 6 percent above last year's levels. No significant change is expected in the 1956 crop year.

Unlike many agricultural commodities, rosin is an industrial raw material. Therefore consumption depends in part on the rate of industrial activity, particularly as related to paper and chemical products. Although industrial utilization of turpentine has been increasing for the past two decades, the outlet for over half the output continues to be in sales over-the-counter to householders for paint thinning, cleaning and other uses. In general, nearly all of the sulphate wood turpentine is consumed industrially while practically all of the steam distilled wood and gum turpentine find their way to the retail market in small containers. On the basis of consumption during the past 33 years, the long-term outlook for both rosin and turpentine consumption appears favorable (table 6).

Table 6.

Rosin and Turpentine
Production, Domestic Consumption and Exports, Averages
1922-31, 1932-41, 1942-51, and 1952-54

Crop Years Begin. April 1	Production	Consumption	Exports
	Rosin 1/ (Thous. drums of 520 lbs. net)		
1922-31 Avg.	1,766	811	972
1932-41 Avg.	1,845	1,029	782
1942-51 Avg.	1,982	1,519	506
1952-54 Avg.	2,075	1,507	555
	Turpentine (Thous. 50-gallon barrels)		
1922-31 Avg.	626	357	267
1932-41 Avg.	616	409	219
1942-51 Avg.	596	504	104
1952-54 Avg.	574	504	95

1/ Including equivalent drums of tall oil resin acids computed on basis of 45 percent content.

Table 5

Supplies and Requirements, Rosin and Turpentine
By Types, Crop Years 1948-49 through 1954-55
(Actual) and 1955-56 (Estimated)

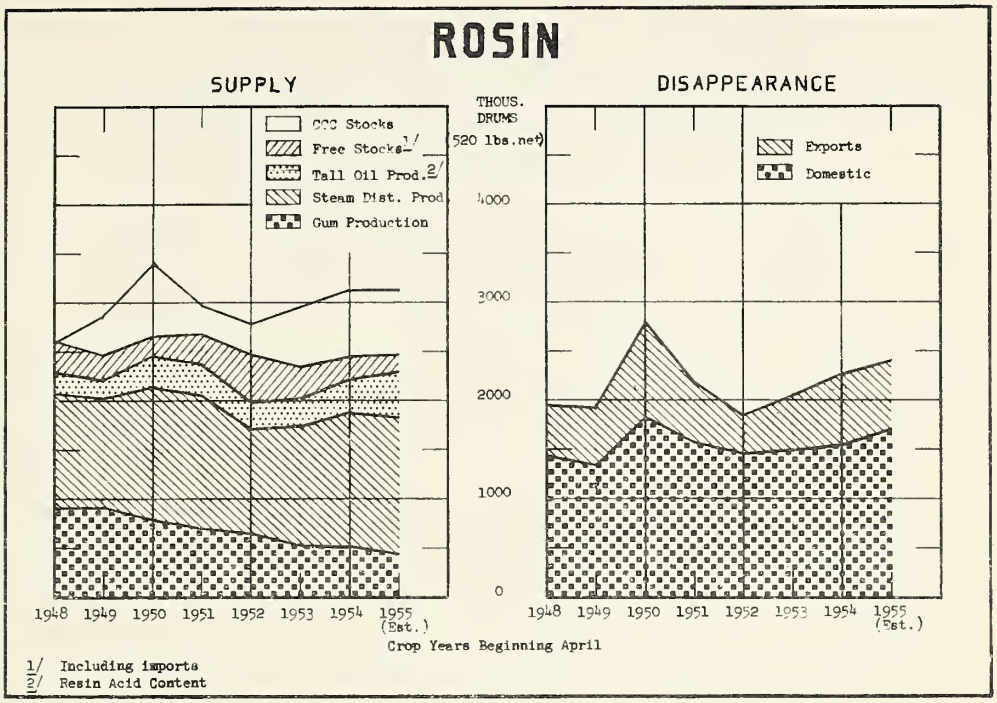
Crop Year Beginning April 1	Commodity and Type	SUPPLY: Carry-in Stocks 1/	Production	Imports	Available Supply	REQUIREMENTS: Domestic	Export	Total	Carry-out Stocks
	Rosin (520 lb. drums)								
1948	Gum	162,090 2/	921,220	1,071	1,084,381	370,583	236,228	606,811	477,570 2/
	S.D. Wood	115,890 2/	1,154,890	-0-	1,270,780	864,071	266,049	1,130,120	140,660 2/
	Tall Oil 3/ & Tall Oil Rosin	39,408	214,500	-0-	253,908	188,570	24,325	212,895	41,013
	Total	317,388 2/	2,290,610	1,071	2,609,069	1,423,224	526,602	1,949,826	659,243 2/
1949	Gum	477,570 2/	924,900	4,229	1,406,699	347,152	256,927	604,079	802,620 2/
	S. D. Wood	140,660 2/	1,098,610	-0-	1,239,270	842,512	305,098	1,147,610	91,660 2/
	Tall Oil 3/ & Tall Oil Rosin	41,013	191,473	-0-	232,486	153,026	28,331	181,357	51,129
	Total	659,243 2/	2,214,983	4,229	2,878,455	1,342,690	590,356	1,933,046	945,409 2/
1950	Gum	802,620 2/	797,620	4,475	1,604,715	550,584	595,591	1,146,175	458,540 2/
	S. D. Wood	91,660 2/	1,339,410	-0-	1,431,070	985,348	345,682	1,331,030	100,040 2/
	Tall Oil 3/ & Tall Oil Rosin	51,129	316,144	-0-	367,273	282,466	39,618	322,084	45,189
	Total	945,409 2/	2,453,174	4,475	3,403,058	1,818,398	980,891	2,799,289	603,769 2/
1951	Gum	458,540 2/	716,350	1,980	1,176,870	392,190	293,140	685,330	491,540 2/
	S. D. Wood	100,040 2/	1,333,040	-0-	1,433,080	923,479	278,561	1,202,040	231,040 2/
	Tall Oil 3/ & Tall Oil Rosin	45,189	323,546	-0-	368,735	258,489	37,260	295,749	72,986
	Total	603,769 2/	2,372,936	1,980	2,978,685	1,574,158	608,961	2,183,119	795,566 2/
1952	Gum	491,540 2/	638,360	3,000	1,132,900	312,563	138,577	451,140	681,760 2/
	S. D. Wood	231,040 2/	1,082,530	-0-	1,313,570	917,178	218,062	1,135,240	178,330 2/
	Tall Oil 3/ & Tall Oil Rosin	72,986	267,033	-0-	340,019	239,611	28,208	267,819	72,200
	Total	795,566 2/	1,987,923	3,000	2,786,489	1,469,352	384,847	1,854,199	932,290 2/
1953	Gum	681,760 2/	531,620	1,410	1,214,790	348,050	132,100	480,150	734,640 2/
	S. D. Wood	178,330 2/	1,213,340	-0-	1,391,670	913,880	384,350	1,298,230	93,440 2/
	Tall Oil 3/ & Tall Oil Rosin	72,200	273,752	-0-	345,952	240,133	35,825	275,958	69,994
	Total	932,290 2/	2,018,712	1,410	2,952,412	1,502,063	552,275	2,054,338	898,074 2/
1954	Gum	734,640 2/	527,700	390	1,262,730	345,220	208,840	554,060	708,670 2/
	S. D. Wood	93,440 2/	1,342,370	-0-	1,435,810	887,420	458,470	1,345,890	89,920 2/
	Tall Oil 3/ & Tall Oil Rosin	69,994	347,209	-0-	417,203	317,759	60,519	378,278	38,925
	Total	898,074 2/	2,217,279	390	3,115,743	1,550,399	727,829	2,278,228	837,515 2/
1955	Gum	708,500 2/	435,000	500	1,144,000	400,000	169,000	564,000	575,000 2/
	S. D. Wood	90,000 2/	1,390,000	-0-	1,480,000	935,000	455,000	1,390,000	90,000 2/
	Tall Oil 3/ & Tall Oil Rosin	39,000	460,000	-0-	499,000	380,000	60,000	440,000	59,000
	Total	837,500 2/	2,285,000	500	3,123,000	1,715,000	684,000	2,399,000	724,000 2/
	Turpentine (50 gal. bbls.)								
1948	Gum	87,390 2/	324,330	13,613	425,333	227,287	70,916	298,203	127,130 2/
	Wood (Total)	107,960 2/	334,810	-0-	442,770	294,442	45,768	340,210	102,560 2/
	S. D.	4/	207,160	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	124,870	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,780	-0-	4/	4/	4/	4/	4/
	Total	195,350 2/	659,140	13,613	868,103	521,729	116,684	638,413	229,690 2/
1949	Gum	127,130 2/	323,010	14,170	464,310	240,380	99,270	339,650	124,660 2/
	Wood (Total)	102,560 2/	350,280	-0-	452,840	315,256	56,284	371,540	81,300 2/
	S. D.	4/	199,630	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	147,500	-0-	4/	4/	4/	4/	4/
	D. D.	4/	3,150	-0-	4/	4/	4/	4/	4/
	Total	229,690 2/	673,290	14,170	917,150	555,636	155,554	711,190	205,960 2/
1950	Gum	124,660 2/	271,880	16,771	413,311	239,940	137,771	377,711	35,600 2/
	Wood (Total)	81,300 2/	436,670	-0-	517,970	354,117	70,693	424,810	93,160 2/
	S. D.	4/	237,080	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	194,180	-0-	4/	4/	4/	4/	4/
	D. D.	4/	5,410	-0-	4/	4/	4/	4/	4/
	Total	205,960 2/	708,550	16,771	931,281	594,057	208,464	802,521	128,120 2/
1951	Gum	35,600 2/	246,460	19,092	301,152	174,571	67,251	241,822	59,330 2/
	Wood (Total)	93,160 2/	437,500	-0-	530,660	352,286	43,254	395,540	135,120 2/
	S. D.	4/	229,590	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	203,430	-0-	4/	4/	4/	4/	4/
	D. D.	4/	4,480	-0-	4/	4/	4/	4/	4/
	Total	128,760 2/	683,960	19,092	831,812	526,857	110,505	637,362	194,450 2/
1952	Gum	59,330 2/	217,360	19,636	296,326	173,084	43,042	216,126	80,200 2/
	Wood (Total)	135,120 2/	347,580	-0-	482,700	294,635	39,115	333,750	148,950 2/
	S. D.	4/	175,090	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	169,560	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,930	-0-	4/	4/	4/	4/	4/
	Total	194,450 2/	564,940	19,636	779,026	467,719	82,157	549,876	229,150 2/
1953	Gum	80,200 2/	177,680	22,830	280,710	156,500	34,880	191,380	89,330 2/
	Wood (Total)	148,950 2/	360,170	-0-	509,120	348,470	53,070	401,540	107,580 2/
	S. D.	4/	193,090	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	164,220	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,860	-0-	4/	4/	4/	4/	4/
	Total	229,150 2/	537,850	22,830	789,830	504,970	87,950	592,920	196,910 2/
1954	Gum	89,330 2/	175,940	15,360	280,630	145,950	50,240	196,190	84,440 2/
	Wood (Total)	107,580 2/	441,860	-0-	549,440	392,150	65,620	457,770	91,670 2/
	S. D.	4/	207,700	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	231,750	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,410	-0-	4/	4/	4/	4/	4/
	Total	196,910 2/	617,800	15,360	830,070	538,100	115,860	653,960	176,110 2/
1955	Gum	84,000 2/	145,000	16,000	245,000	140,000	46,000	186,000	59,000 2/
	Wood (Total)	92,000 2/	488,000	-0-	580,000	430,000	50,000	480,000	100,000 2/
	S. D.	4/	200,000	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	285,000	-0-	4/	4/	4/	4/	4/
	D. D.	4/	3,000	-0-	4/	4/	4/	4/	4/
	Total	176,000 2/	633,000	16,000	825,000	570,000	96,000	666,000	159,000 2/

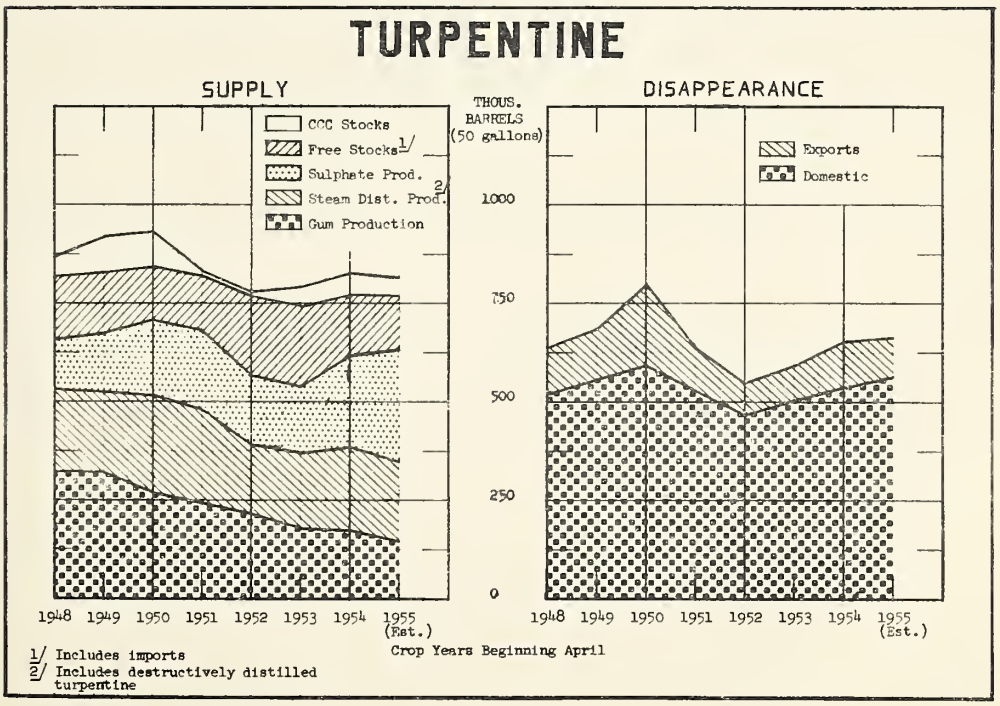
1/ Includes CCC loan stocks.
2/ These are gross stocks and include turpentine and rosin sold and awaiting shipment.
3/ Resin Acid Equivalent.
4/ No breakdown practicable from existing information.

Source: Data for crop years 1948 through 1953 derived from information released by the Agricultural Marketing Service, U.S.D.A., and Department of Commerce.

Supply and Disappearance - Rosin and Turpentine

Crop Years Beginning April 1948 through 1955





Output Rise Expected in 1955. About 2,285,000 drums [1] of rosin [2] (including the resin acids in tall oil) and 633,000 barrels [3] of turpentine are expected to be produced in the 1955 crop year, an increase of 2 1/2 percent over the previous year. A 3-4 percent increase in steam distilled rosin production and a nearly one-third increase in the production of tall oil resin acids should more than offset a 17-18 percent decline in gum rosin output. A 23 percent increase in sulphate wood turpentine production is expected to overcome an 18 percent fall in gum turpentine output and a 3-4 percent reduction in output of steam distilled turpentine.

Further Increase in Output Likely in 1956. Next year may be the fourth year in a row for rosin production [2] to increase; turpentine output is expected to rise for the third straight year. Increases are anticipated in the production of gum rosin and gum turpentine, tall oil and tall oil wood rosin and sulphate turpentine. The peak of steam distilled wood rosin and turpentine output probably has been reached and no increase in 1956 above the 1955 level is likely.

The increase expected in gum rosin and gum turpentine output would reverse a downswing which has been in effect since 1949. The actual quantities to be produced will depend on developments which cannot now be foreseen clearly. As always, temperature and rainfall will be important factors. Equally as important will be the extent to which pulp mill timber owners are willing to grant leases of more than one or two year periods to attract naval stores operators. Following severe forest fires earlier this year, timber owners reportedly are seeking increased forest supervision and caretaker service. Steam distilled wood rosin and turpentine output will stay at about present levels if, as expected, demand remains strong.

The quantity of tall oil rosin produced in 1956 will depend in part on the extent to which markets are developed to absorb the fatty acid content of the crude tall oil.

Long Term Outlook. From table 6 above, it is apparent that over the years domestic rosin production has been rising and turpentine output falling.

In rosin, the expansion of the wood naval stores part of the industry (including tall oil) more than offsets the shrinkage of gum output. While the same alteration in production patterns has occurred in the case of turpentine, in contrast to its rosin counterpart, output has declined slightly. Partial explanation of this

1/ 520 lbs. net each.
2/ Including the resin acid content of tall oil.
3/ 50 gallons each.

lies in the declining yields of gum and steam distilled wood turpentine relative to rosin output. (See table 7 below.) Also the proportion of turpentine to rosin is considerably smaller in steam distilled output (which has been rising) than in gum production (which has been falling).

Table 7.

Turpentine Yields Per Drum of Rosin
1924, 1934, 1944 and 1954

Crop Years Begin. Apr. 1	Gallons Turpentine Output Per Drum of Rosin		
	Steam Distilled	Gum	Both Types Weighted Avg.
1924	14	19	18
1934	10	18	16
1944	9	18	14
1954	8	17	10

The trend in turpentine production probably will be reversed and increased supplies of both rosin and turpentine appear in prospect for the next several years. Within the limits fixed by a rapidly shrinking supply of first growth long leaf pine stumps, the steam distilled part of the naval stores industry is likely to continue producing at or near capacity as long as demand remains strong. Expansion of sulphate pulp production is expected to continue and with it the output of tall oil and sulphate wood turpentine. The present low level of gum naval stores production results in large part from competition of expanding industrial and forestry enterprises. Only about 7 percent of the timber suitable for gum naval stores production now is being so utilized. However, the growing interest of some pulp mills in leasing forest tracts for naval stores operations together with the prospect of lower production costs through continuing research on increased crude pine gum yields and lower labor requirements, may arrest or reverse the decline in gum output.

Lower Stocks in Prospect. Both rosin and turpentine stocks are expected to be lower at the beginning of the next season than at any time since April 1, 1952. Nearly 3/4 of the rosin and 1/5 of the turpentine carry-in for 1956 will be comprised of CCC stocks. Total rosin stocks should constitute a 3 1/2 to 4 month supply compared with the long time average of about 5 months. Overall turpentine stocks should approximate a three month supply compared with a long time average of about 2 1/2 months.

Exports Lower in 1955. Exports may be somewhat lower this year as compared with 1954 because of the increased production, primarily in Portugal and France, which should more than offset the increased foreign consumption resulting from expanded industrial output abroad. The increase in 1955 foreign rosin and turpentine output is estimated (see table 8) at about 17 and 14 percent, respectively. Foreign export availabilities should be about

Production of turpentine and rosin 1/ by specified countries 2/, calendar years (except where otherwise noted) average 1950-54, 1954 and 1955.

Country	TURPENTINE (50 gal. bbls.) 1950-54 Average: Quantity	1950-54 Average: Percent of Total	1954: Quantity	1954: Percent of Total	1955 (Est.): Quantity	1955 (Est.): Percent of Total
	1,000 Bbls.	Percent	1,000 Bbls.	Percent	1,000 Bbls.	Percent
United States 3/	622.6	67.5	617.8	67.8	633.0	65.4
France 4/	89.8	9.7	88.0 5/	9.6	95.0	9.8
Portugal	62.4	6.8	56.4	6.2	86.0	8.9
Spain	51.7	5.6	51.4	5.6	55.0	5.7
Mexico	33.7	3.7	35.3	3.9	35.0	3.6
Greece	20.9	2.3	24.3	2.7	25.0	2.6
Sweden	40.6	4.4	38.0 5/	4.2	39.0	4.0
Total	921.7	100.0	911.2	100.0	968.0	100.0

Country	ROSIN (520 lb. drums) 1,000 Drums	Percent	1,000 Drums	Percent	1,000 Drums	Percent
United States 3/	2,210.0	75.1	2,217.3	75.5	2,285.0	73.0
France 4/	230.2	7.8	220.0 5/	7.5	245.0	7.8
Portugal	173.6	5.9	157.0	5.3	240.0	7.7
Spain	122.1	4.2	124.7	4.3	136.0	4.3
Mexico	104.4	3.5	102.2	3.5	102.0	3.3
Greece	52.5	1.8	62.7	2.1	65.0	2.1
Sweden 6/	49.1	1.7	53.0 5/	1.8	55.0	1.8
Total	2,941.7	100.0	2,936.9	100.0	3,128.0	100.0

1/ Including resin acid content of crude tall oil.
2/ Although the USSR is believed to be a substantial producer of naval stores, no current information is available from this source.
3/ Crop years April 1 through March 31. Includes gum, steam distilled wood, sulphate wood, and destructively distilled wood naval stores. Resin acid content of crude tall oil computed at 45 percent.
4/ Crop years May 1 through April 30.
5/ Preliminary.
6/ Assuming 40 percent resin acid content of crude tall oil.

Sources: Foreign production data from official trade statistics, U.S. Foreign Service dispatches and foreign trade sources; U.S. data from AMS and Bureau of the Census reports.

40,000 barrels of turpentine and 120,000 drums of rosin more than in 1954 but, as already indicated, part of this should be absorbed by rising consumption abroad.

Foreign stocks should be negligible at the end of the producing season. This factor, together with expectation of relatively little change in foreign naval stores output next year (possibly a slight increase if weather is favorable), points to about the same quantity of exports in 1956 as in 1955.

An interesting development in the foreign naval stores situation during the past year has been the attempted formation of a cartel to market the European naval stores production. Other developments of interest, which may eventually affect the foreign market for American naval stores, include discovery of oil in the naval stores producing region in Southwestern France and the construction of several sulphate pulp mills in Europe including one in Portugal.

Over a long period, the export outlet for both rosin and turpentine has become progressively less important. Whereas, 20 years ago over half the rosin output and about 40 percent of the turpentine production was absorbed by the foreign market, during the past five years exports accounted for less than 30 percent of domestic rosin output and 20 percent of the turpentine production.

Prices to Hold Near Present Levels. Prices of rosin and turpentine are likely to stay close to present levels well into 1956. Although foreign supplies of naval stores should be exhausted early next year, it is doubtful whether any resultant increase in export demand will be sufficient to raise prices substantially above the present level.

Gum turpentine prices and the price of rosin in drums probably will average about 8 percent higher than last year. This would be the highest since the crop year ending March 31, 1952. The price of turpentine, however, still is expected to average substantially under the 61 cents per gallon average for the past ten years. Prices of gum rosin in bags and tank cars presently are at premiums compared to prices for rosin in drums. This is due mainly to the fact that rosin shipped in bags and tank cars is for the expanding domestic market and does not compete with foreign output which, at present, is being offered at prices below corresponding quotations for American production. Also, some processors are unable to deliver gum rosin in bags while others prefer not to because of the additional time, labor and other factors involved. Finally, the absence of any significant carry-over of crude gum from last year's crop forces bagged and

Table 9

Gum Rosin, Gum Turpentine, Crude Pine Gum and the Naval Stores Unit, Market, Parity and Support Prices and Net Volume of Price-Support Acquisitions or Disposals, 1934-55

Crop Year beginning April 1	ROSIN: Average Market Price 1/ ($ per 100 lbs. net)	ROSIN: Average Price Support Rates ($ per 100 lbs. net)	ROSIN: Net Change in CCC Stocks (Drums 2/)	TURPENTINE: Average Market Prices 1/ ($ per gallon bulk)	TURPENTINE: Average Price Support Rates ($ per gallon bulk)	TURPENTINE: Net Change in CCC Stocks (Barrels 3/)	CRUDE GUM: Average Market Price ($ per standard barrel 6/)	CRUDE GUM: Average Price Support Rates 13/ ($ per standard barrel 6/)	NAVAL STORES UNIT 4/: Average Market Value 1/ ($ per naval stores unit)	NAVAL STORES UNIT 4/: Parity, 5/ processed basis ($ per naval stores unit)	NAVAL STORES UNIT 4/: Average Support Value ($ per naval stores unit)	NAVAL STORES UNIT 4/: Support Value as percent of Parity (Percent)
1934	1.98	1.95	↑ 150,000	.396	.420	↑ 92,000	-0-	10.28	47.52	74.06	48.30	65
1935	1.97	1.95	↑ 9,000	.376	.420	↑ 55,000	-0-	10.28	46.38	76.98	48.30	63
1936	2.79	7/	- 126,000	.315	7/	- 69,000	-0-	7/	54.81	73.34	7/	7/
1937	3.20	7/	- 33,000	.254	7/	- 32,000	-0-	7/	57.50	79.81	7/	7/
1938	2.18	2.34	↑ 764,000	.166	.194	↑145,000	-0-	9.04	38.82	75.83	42.48	56
1939	2.37	2.44	↑ 188,000	.193	.197	- 91,000	-0-	9.36	42.83	73.34	44.01	60
1940	1.98	2.21	↑ 207,000	.240	.217	- 8,000	7.86 12/	8.89	39.72	74.68	41.79	56
1941	2.42	2.28	- 540,000	.527	.287	- 92,000	11.70	9.84	60.23	74.68	46.27 8/	62
1942	3.22	3.55 9/	↑ 160,000	.591	.650 9/	↑154,000	14.60	17.49	74.63	88.63 10/	82.20 10/	93
1943	3.97	3.70 9/	- 589,000	.679	.680 9/	↑ 70,000	17.70	18.26	89.53	90.26	85.80 10/	95
1944	5.61	4.03 9/	- 183,000	.779	.740 9/	- 94,000	23.50	19.88	117.49	98.41	93.42 10/	95
1945	6.50	3.89	- 2,000	.791	.720	-129,000	26.40	19.25	130.55	100.76	90.46	90
1946	7.43	4.05	- 6,000	.967	.744	- 1,000	30.80	19.98	152.37	104.21	93.92	90
1947	7.83	6.35	-0-	.627	.608	↑ 53,000	28.20	25.32	140.97	132.25	119.02	90
1948	7.39	7.94	↑ 407,000	.428	.483	↑ 36,000	24.40	28.00	124.86	146.20	131.58	90
1949	6.47	6.78	↑ 344,000	.384	.400	- 4,000	20.90	24.29	109.78	142.70	114.14	80
1950	6.31	4.77	- 440,000	.551	.400	- 75,000	22.60	18.47	115.89	144.70	86.82	60
1951	8.73	7.37	↑ 10,000	.763	.500	↑ 1,000	30.50	27.28	160.37	142.46	128.21	90
1952	7.53	7.48	↑ 283,000	.534	.500	↑ 34,000	24.50	27.60	132.12	144.13	129.72	90
1953	7.72	7.44	↑ 68,422	.516	.500	↑ 14,000	24.60	27.62	133.88	144.24	129.81	90
1954	7.91	7.48	- 17,000	.519	.500	- 5,000	25.00		136.69	143.35	130.33	90
1955 (Est.)	8.52	7.43 11/	- 157,000	.560	.500	- 30,000	27.00	27.45	147.28	142.03	129.02	90

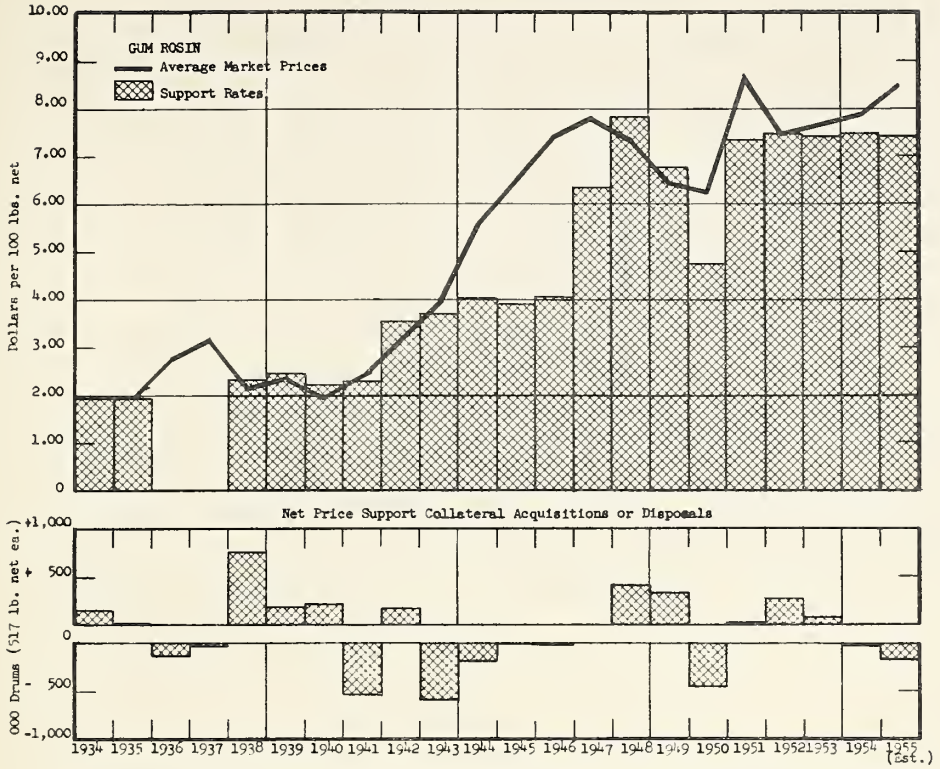
1/ Quotations of Savannah Cotton & Naval Stores Exchange (1934-50). Reports of Naval Stores Market News Service (1951-55).
2/ Averaging 517 lbs. net.
3/ 50 gallons each.
4/ 50 gallons of turpentine and 1,400 pounds of rosin.
5/ Through the 1950 loan program, parity was computed on processed rosin and turpentine. Thereafter, however, parity was computed on the crude pine gum from which these commodities are derived.
6/ 435 pounds net.
7/ No program.
8/ Weighted average. Loan rates were $41.93 through 8/1/41 and $48.93 after 8/1/41.
9/ Represents purchase rates with rosin basis K grade. Loan rates were lower as follows:
1942 program - $3.05 for rosin, $.55 for turpentine;
1943 program -$3.50 for rosin, $.64 for turpentine;
1944 program - $3.82 for rosin.
The 1944 program was inactive because of higher market values.
10/ Represent purchase program rate. Loan program rates in 1942 averaged $70.20 per unit or 85 percent of December 1, 1941 parity ($82.56); under the 1943 program per unit loan rate was $81.00 or 90 percent of parity; under the 1944 program the 90 percent of parity loan rate was $88.48 per unit.
11/ Basis grade WG.
12/ No information available prior to 1940.
13/ Crude gum price support rates 1934 through 1950 computed on basis of 4.7 standard barrels of gum per naval stores production unit. Actual support rates 1951 through 1955.

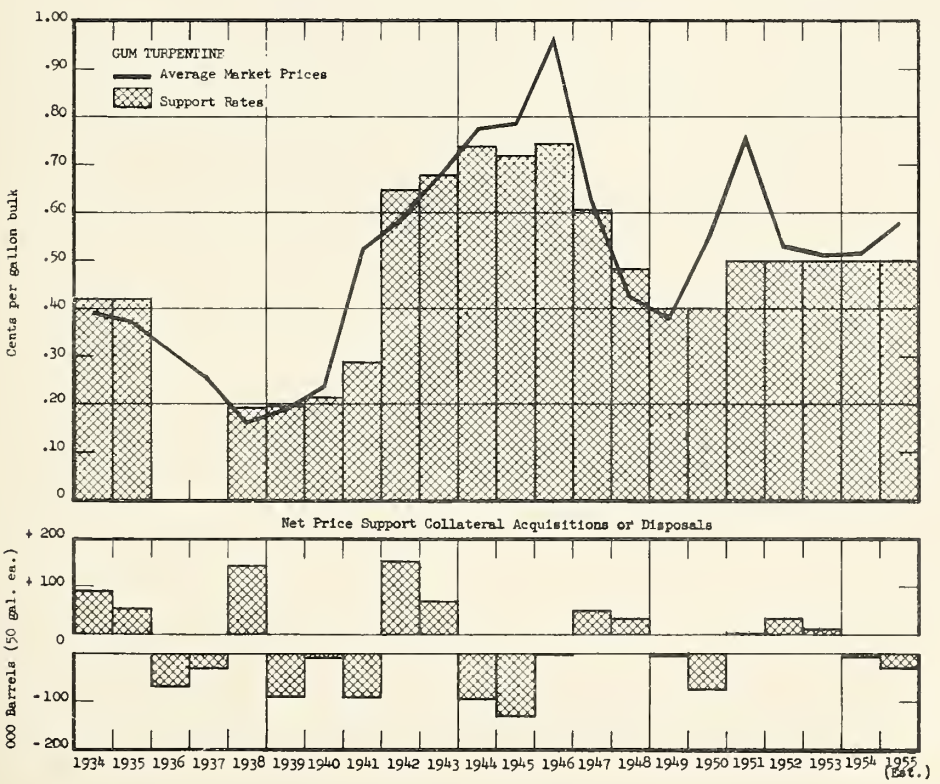
Chart 11

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GUM ROSIN AND GUM TURPENTINE

Average Market Prices and Support Rates
and
Net Price Support Collateral Acquisitions or Disposals
Crop Years, 1934 through 1955



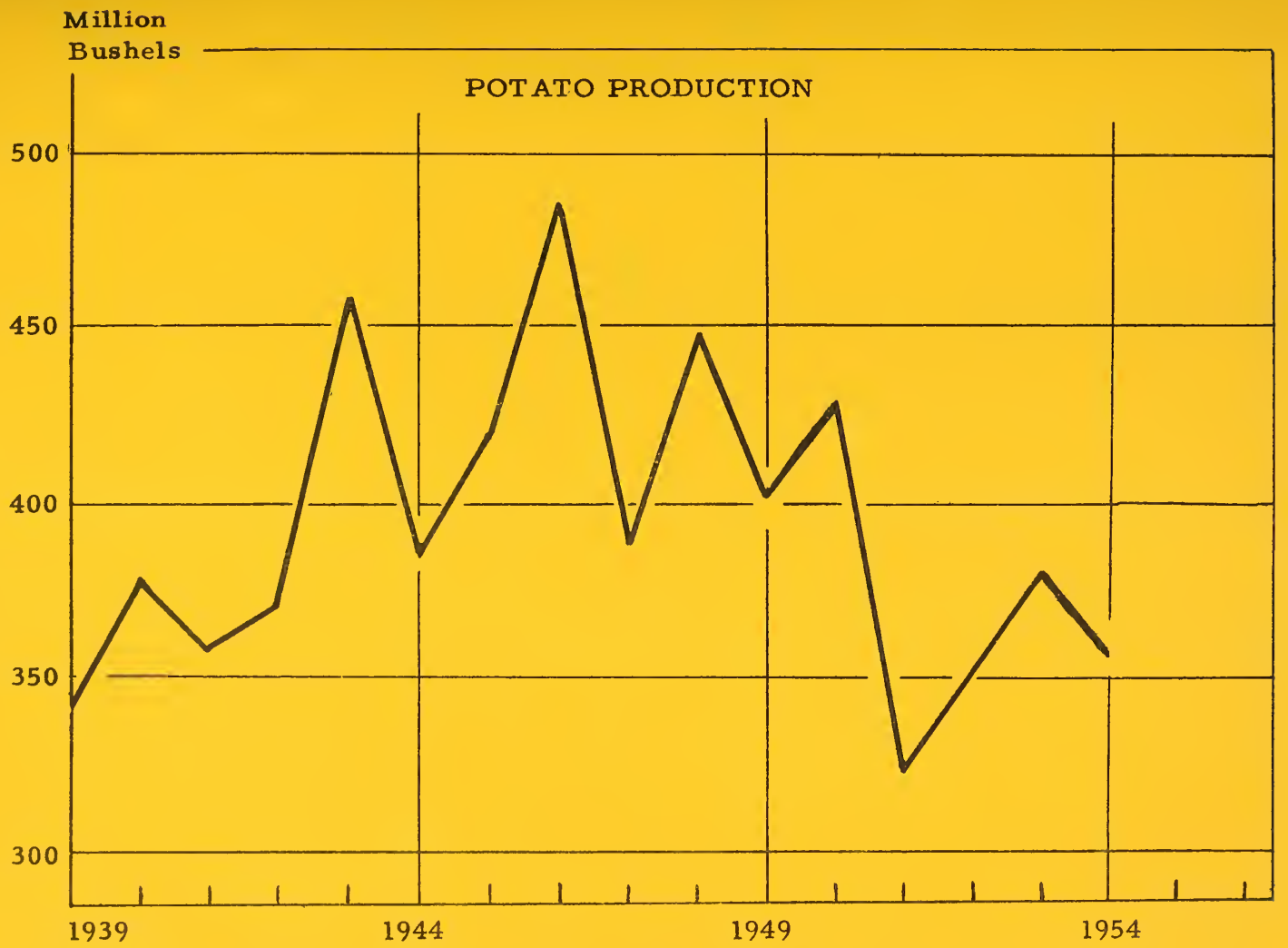


tank car rosin to come from this year's all time low gum output.

The present strong market situation continues the trend which began more than two years ago. Last year all loans under the 1954 program were redeemed and about 15,000 drums of rosin and 4,000 barrels of turpentine sold from CCC stocks acquired under the 1953 and prior programs. This year, the 1955 loan program has been inactive and through November 10, 113,298 drums of CCC rosin and 16,407 barrels of CCC turpentine have moved into consumption to fill the gap between requirements and free supplies. Before the end of the crop year, CCC stocks are likely to be called on for substantial additional quantities of rosin and turpentine.

The important influence of price support programs on naval stores prices over the past two decades is shown in table 9 and chart 11. It will be observed from the net changes in price support stocks that in many years rosin and turpentine prices were bolstered through net accumulations of collateral. In other years, when liquidations exceeded loans, prices tended to be depressed. Finally, there were years when program pledges and disposals were about equal with the result that CCC operations apparently had little or no overall effect on prices.

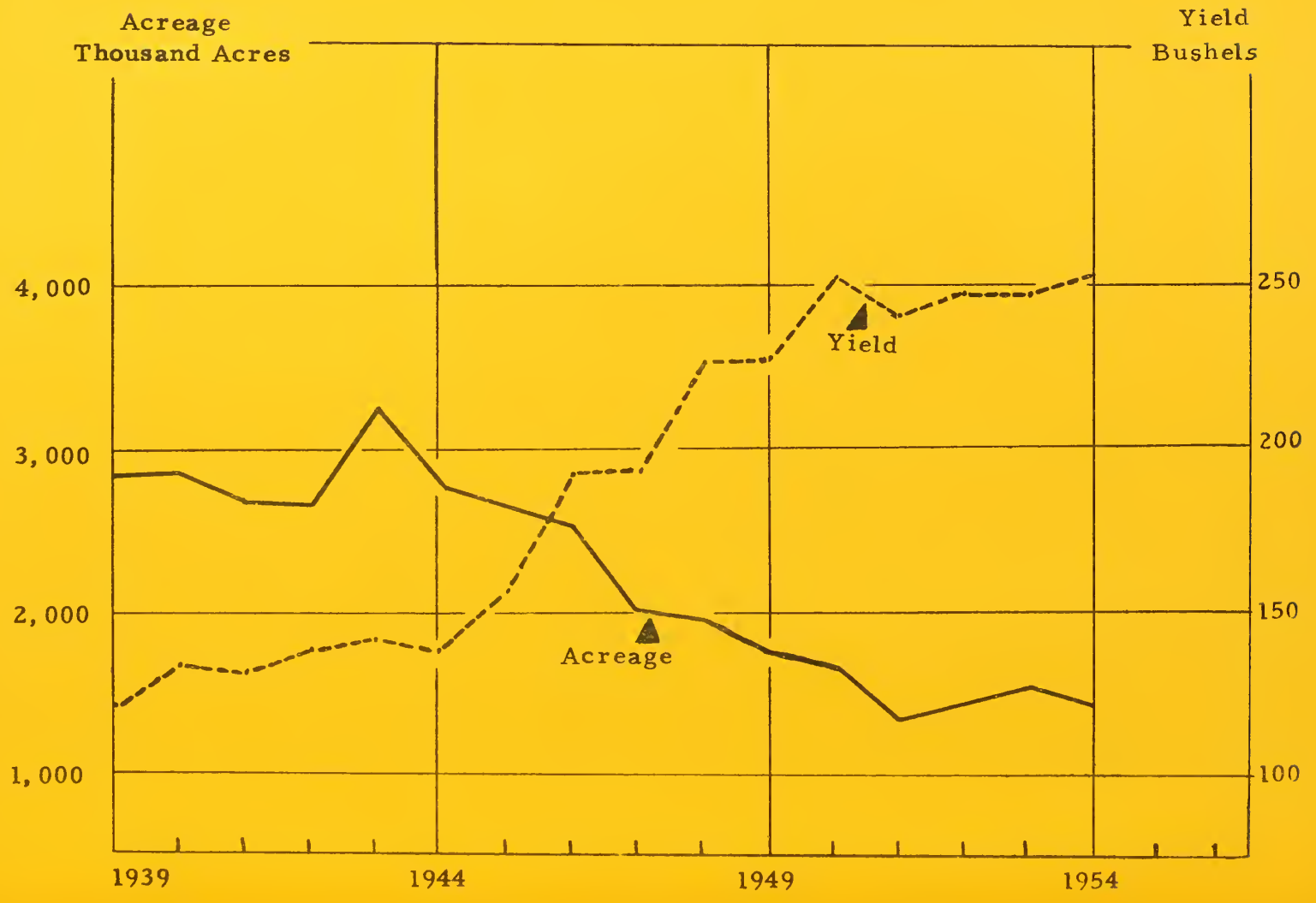
PRODUCTION CONSIDERATIONS IN THE 1956 POTATO OUTLOOK



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Prepared for the 33rd National Outlook Conference, Nov. 28 - Dec. 1, 1955, by the Fruit and Vegetable Statistics Branch, Agricultural Estimates Division, Agricultural Marketing Service, U. S. D. A.

POTATOES - ACREAGE HARVESTED AND YIELD PER HARVESTED ACRE



PRODUCTION CONSIDERATIONS

IN THE 1956 POTATO OUTLOOK

Background: Potato production during the past 17 years has been characterized by a drastic reduction in acreage, a phenomenal increase in yield per acre, and the maintenance of volume at a high level. Back in 1939, about 2.8 million acres were harvested. The 1955 harvested acreage will be a little less than 1.5 million acres. During the same period, yield per harvested acre rose from about 122 bushels to better than 250 bushels.

At the beginning of the 17-year period, production averaged 361 million bushels (1939-42 ranged from 342 to 377 millions). For the following 8 years, 1943-50, when war-time incentives and price supports were stimulating factors, production reached an all-time record of 487 million bushels and averaged 428 millions. During the 4 years 1951-54, when the crops were grown without the benefit of price supports, production averaged 351 million bushels. The 1955 crop is currently (November 1) estimated at 384 million bushels. The 1955 yield per acre, at 266 bushels, is the highest of record.

The greatest upsurge in yields per acre coincided with the period following World War II, 1946-50, when prices were supported at 60 to 90 percent of parity and growers were required to comply with Government acreage allotments in order to be eligible to receive payments. From 1945 to 1950, harvested acreage was cut from 2,664,000 acres to 1,696,000 (36 percent) but yield per acre rose from 157 bushels to 253 bushels, an increase of 61 percent. This phenomenal increase in yield was brought about by several factors, including the reduction of low-yielding acreage, the concentration of production on specialized potato farms, and improved cultural practices.

A large part of the acreage decrease was brought about by the elimination of much marginal acreage and by many growers who discontinued producing potatoes solely for farm use. Between 1944 and 1949, the number of farms growing potatoes dropped from 2,065,227 to 1,649,906, according to the Census. The Census also showed that 82 percent of the 1949 crop was produced on only 30,789 farms that grew 10 acres or more of potatoes.

The reduction in marginal acreage and noncommercial acreage resulted in a larger part of the crop being grown on the more fertile, higher-yielding soils. This change occurred both within States and between States. Growers in the low-yielding States made more drastic acreage cuts than those in high-yielding States, thereby shifting a larger part of production into the high-yielding States.

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Better cultural practices, including the wider use of improved potato varieties and certified seed, contributed significantly to the increase in yields. With the assurance of 60 to 90 percent of parity for potatoes, growers placed the potato rows closer together, planted more seed per row, applied more fertilizer per acre, and sprayed more frequently with more potent insecticides and fungicides. In addition, potatoes were often left in the ground beyond the usual digging date in order to attain maximum size. Beginning with 1951, when price supports were taken off, yield per acre leveled off and remained fairly stable until 1955.

The regional production picture shows some significant trends since 1939. In the 7 intermediate States, the crop declined from 8 percent to 4 percent of the total United States production. In the 13 early States, production increased slightly from 14 percent to about 16 percent of the total crop. In the 29 late States, a slight increase also was registered, production rising from 78 percent to about 80 percent of the United States total. Perhaps of more significance are the regional shifts within the late group of States. A significant decline is shown for the 9 Central States which now produce less than 20 percent of the national crop compared with 28 percent in 1939. Most of these States have relatively low yields per acre. The 9 Eastern States have about held their own at approximately 30 percent of the crop. The 11 Western States have shown a pronounced upward trend and now produce 32 percent of the national crop compared with 23 percent in 1939.

An examination of farm disposition of the potato crop shows additional evidence of the recent trend towards commercialized production. As recently as 1940 only 67 percent of the crop was sold. During the 5 most recent seasons, sales have averaged close to 84 percent of the crop. During the 16-year period 1939-54, the total quantity of potatoes used or lost on farms where grown has declined in both quantity and as a percentage of production. The quantity saved for farm household use declined from about 60 million bushels in 1939 to 18.4 millions in 1954. This decline reflects both the decrease in the number of farms growing potatoes and in the quantity used per farm. The quantity saved for seed to plant on farms where grown also declined drastically from 24.5 million bushels to about 12 millions. This reduction was caused partly by the cut in acreage and partly by the tendency of commercial growers to purchase certified seed for planting. Potatoes that were fed to livestock on farms where grown or that were lost through shrinkage and decay have remained at a fairly constant percentage of production, averaging 7 percent for the 5-year period 1950-54, compared with 8.4 percent for 1939-43.

Aside from the changing trends in farm disposition, important changes also have occurred over the past 15 years in the uses made of potatoes after they leave the growers' hands. As previously pointed out, the level of production is about the same as it was 15 years ago but the quantity sold is larger, averaging about 307 million bushels in 1950-54 compared with 262 millions in 1939-43. The larger

quantities now being sold are finding their way, to an increasing extent, into new outlets, the largest change occurring in the quantities processed for human food. Back in 1940, only 5.4 million bushels, or 2.1 percent of total sales, were processed for food, according to industry estimates. Most of this processed quantity, 83 percent, went into the manufacture of potato chips. The remainder was used in the processing of hash, stews, soups, and potato flour. By 1954, according to industry figures, the quantity processed for food had increased to 42 million bushels or 14 percent of the quantity sold. Of this amount, 32 million bushels were used for the manufacture of potato chips, 3.6 million for frozen french fries and other forms of prepared frozen foods, 3.0 million for dehydration, and 34 million for other uses, as canning, hash, stews, and soups. In 1940, processors of food purchased 1 bushel out of every 50 sold by growers, whereas in 1954 they purchased 1 bushel out of every 7 leaving growers' hands. Processors are specific-use purchasers, as potatoes used for potato chips and frozen prepared food should be high in solid matter content, limited to a few varieties, conditioned before using in especially equipped storages in the late States, and meet certain interior and culinary requirements of the final products.

Potatoes sold for non-food products such as starch and alcohol amount to a sizable volume each year. Since these uses are usually a diversion of surplus production at salvage prices, the volume sold depends on the price. In the last 15 years the amount used by processors for starch has varied from 3.4 million bushels from the 1942 crop (1.4 percent of quantity sold by growers) to over 21.8 million bushels for the 1950 crop (6.1 percent of potatoes sold). Large quantities of potatoes were used for the manufacturing of alcohol during the war. In recent years, potatoes have not been used for this purpose and distillers are not now equipped to use potatoes.

Another important non-food outlet has been the volume of potatoes sold by farmers for livestock feed. In recent years, while no official estimates are available, probably from 5 to 8 percent of the crop is used in this manner.

Current Supply Considerations: Acreage and marketing guides issued by the Department of Agriculture in advance of the planting season indicated that a production of 339 million bushels in 1955 would be sufficient to meet anticipated market requirements at fair price levels to growers. The 1955 planted acreage exceeded the acreage guides by nearly 9 percent and total production is estimated at 384 million bushels--45 million bushels in excess of the Department's recommended production. Overplanting of acreage guides was pronounced in most of the higher yielding States of the various seasonal groups and in the Red River Valley. In the group of 13 early States, Florida, California, and Arizona averaged 22 percent in excess of the guides; in the 7 intermediate States, Delaware, Virginia and New Jersey averaged 15 percent in excess; and among the late States, the aggregate acreage planted in Washington, Maine, Idaho, Minnesota,

California, North Dakota, Oregon, Colorado, Utah, and Long Island, New York, exceeded the guides by 14 percent. The combined acreage in all of the 16 States listed above exceeded acreage guides by 15 percent and accounted for about 96 percent of the total for all States overplanting their acreage guides. The 17 States planting below the guides planted 6 percent less than the recommendations.

The large 1955 crops in the early and intermediate producing States set a pattern of marketing problems that has carried over into the Late States. Low prices retarded harvesting of summer potatoes and built up a backlog of summer supplies that exerted a depressing effect on the price of fall harvested potatoes. Currently, growers in the 29 late potato States are grappling with the problem of marketing a crop estimated at 303 million bushels, or 31 million bushels in excess of the marketing guide recommended by the Department for these States. In view of this large production, storage supplies for marketing after January 1 will be large.

Future Production Considerations: If the present tendency of growers in specialized and high-yielding areas to maintain or increase acreage continues, future crops can be expected to be too large to be marketed at a profit. Large crops usually bring growers a smaller gross income than small crops. For example, sales from the crop of 356 million bushels in 1954 were valued at 384 million dollars compared with only 248 million dollars from the large crop of 380 million bushels produced in 1953. Prices to growers in September and October 1955, at only 50 percent of parity for both months, are indicative of the low income which growers will receive from the large 1955 crop. Such being the case, it would seem logical for potato growers to give serious consideration in the future to the effect of large crops on income and attempt to keep production in line with market requirements. This cannot be done by cut-throat competition between growers and between the various commercial areas. This type of competition results in losses by growers in all areas.

Unless all potato growers in the specialized potato areas show a greater disposition to hold production more nearly in line with market outlets, recurring large crops and low prices normally can be expected. The Department publishes Acreage-Marketing Guides to assist growers in planning an acreage that under average conditions will produce the desired crop.

Potatoes: Acreage, yield, and production, United States, 1939-54

Crop of	Planted Acreage	Harvested Acreage	Yield per Acre	Production
	Thous. Acres	Thous. Acres	Bushels	Million Bushels
1939	2867.4	2812.8	121.7	342.4
1940	2885.7	2832.1	133.1	376.9
1941	2749.1	2692.6	132.1	355.7
1942	2755.1	2670.8	138.1	368.9
1943	3354.7	3239.0	141.7	458.9
1944	2878.2	2779.8	138.1	383.9
1945	2728.7	2664.3	157.4	419.4
1946	2570.6	2526.6	192.9	487.3
1947	2033.6	2001.3	194.4	389.0
1948	2007.3	1980.7	227.1	449.9
1949	1778.4	1758.6	228.8	402.4
1950	1711.8	1696.4	253.4	429.9
1951	1358.7	1334.1	240.3	320.5
1952	1421.4	1401.9	249.0	349.1
1953	1548.6	1524.6	249.3	380.1
1954	1425.7	1408.1	252.8	356.0

Potatoes: Production by regions, United States, 1939-54

Crop of	9 Eastern Late States		9 Central Late States		11 Western Late States		29 Late States		7 Intermediate States		13 Early States		United States
	Mil- lion bu.	% of U. S. Prod.	Mil- lion bu.	% of U. S. Prod.	Mil- lion bu.	% of U. S. Prod.	Mil- lion bu.	% of U. S. Prod.	Mil- lion bu.	% of U. S. Prod.	Mil- lion bu.	% of U. S. Prod.	Prod. Million bu.
1939	93.5	27	94.4	28	80.0	23	267.9	78	27.7	8	46.8	14	342.4
1940	105.8	28	97.0	26	91.8	24	294.6	78	33.5	9	48.8	13	376.9
1941	106.8	30	91.3	26	80.8	23	278.9	79	29.3	8	47.5	13	355.7
1942	104.1	28	89.3	24	91.0	25	284.4	77	31.5	9	53.0	14	368.9
1943	135.8	30	105.7	22	117.1	26	358.6	78	35.0	8	65.3	14	458.9
1944	115.8	30	81.5	21	106.0	28	303.3	79	23.1	6	57.5	15	383.9
1945	115.1	27	91.7	22	118.9	29	325.7	78	30.6	7	63.0	15	419.4
1946	159.1	32	86.7	18	124.2	26	370.0	76	35.7	7	81.6	17	487.3
1947	132.7	34	72.6	19	93.3	24	298.6	77	31.0	8	59.4	15	389.0
1948	148.6	33	80.2	18	124.2	28	353.0	79	31.9	7	65.0	14	449.9
1949	133.3	33	77.9	19	109.0	27	320.2	79	22.6	6	59.6	15	402.4
1950	128.6	30	82.5	19	127.6	30	338.7	79	27.4	6	63.8	15	429.9
1951	97.1	30	58.4	18	95.4	30	250.9	78	20.4	6	49.2	16	320.5
1952	107.8	31	59.6	17	115.2	33	282.6	81	14.1	4	52.4	15	349.1
1953	112.7	30	65.7	17	118.5	31	296.9	78	17.6	5	65.6	17	380.1
1954	104.8	29	70.5	20	112.7	32	288.0	81	16.1	4	51.9	15	356.0

Potatoes: Production and farm disposition, United States, 1939-54

Crop of	Production	Total used for seed	Farm disposition 3/			
			Used on farms where grown			
			For seed	Fed to livestock, shrinkage, and loss after harvest	For farm household use	Sold
	- Million Bushels -					
1939	342.4	42.9	24.5	30.9	60.1	226.8
1940	376.9	42.0	23.4	37.2	63.1	253.2
1941	355.7	42.3	23.4	28.1	58.5	245.7
1942	368.9	52.3	27.0	24.4	60.7	256.8
1943 1/	458.9	47.6	22.9	42.1	64.4	329.0
1944	383.9	46.7	20.5	24.1	48.5	290.9
1945	419.4	45.3	18.5	28.1	49.2	323.6
1946	487.3	37.6	15.4	31.0	48.0	392.9
1947	389.0	39.0	14.4	22.2	37.5	314.8
1948	449.9	35.3	12.2	27.3	34.4	376.1
1949	402.4	35.7	13.4	27.8	29.9	331.3
1950	429.9	29.1	10.9	31.3	28.9	358.7
1951	320.5	31.1	12.0	18.6	23.5	266.4
1952	349.1	34.7	12.5	20.9	20.5	295.1
1953	380.1	32.6	12.4	30.9	19.0	317.8
1954 2/	355.1	32.4	12.0	29.0	18.4	295.7

1/ Production includes 440,000 bushels in Oregon left in the ground because of low prices.

2/ Preliminary. May 6, 1955 estimates.

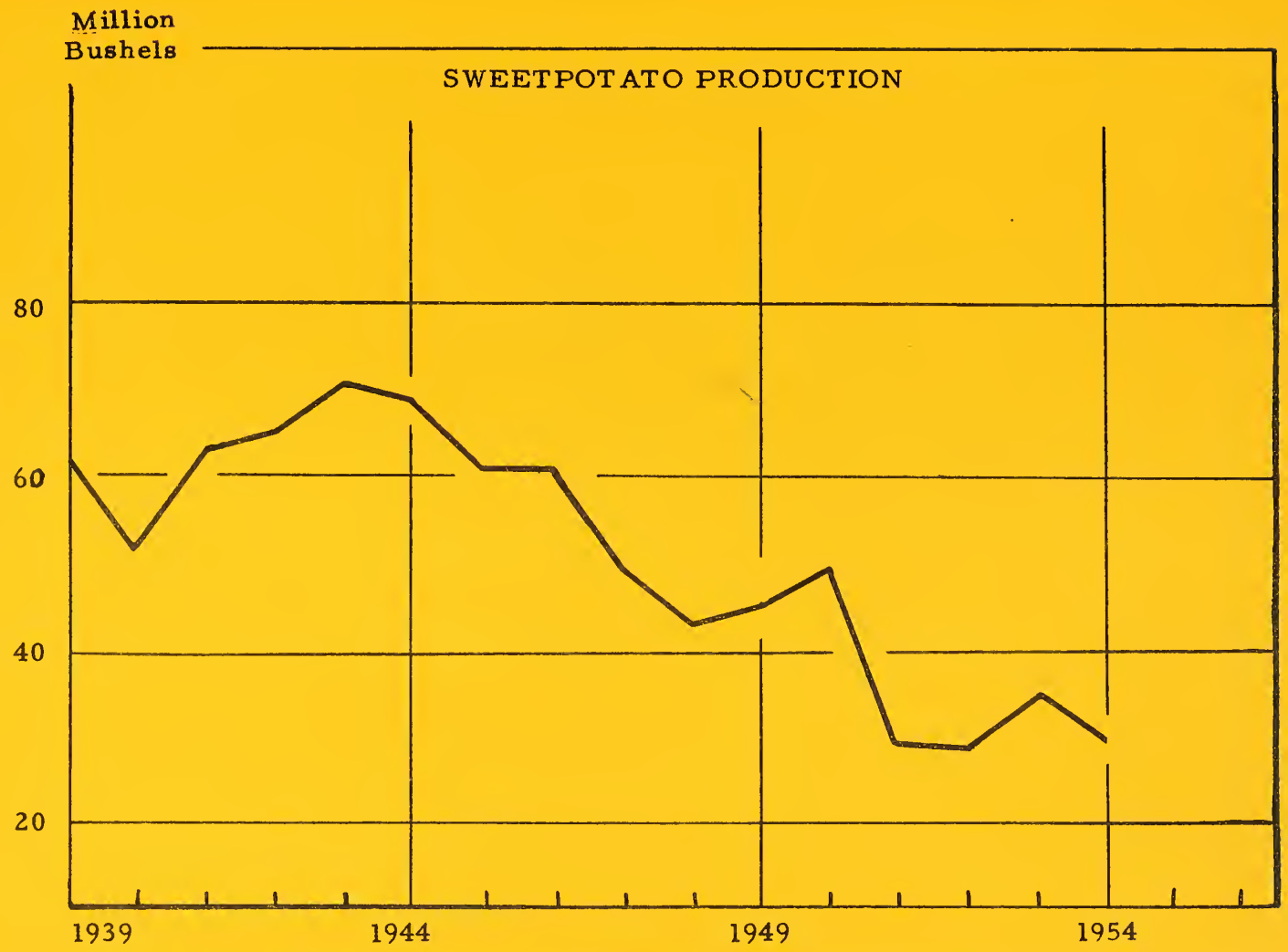
3/ In some years, due to rounding, farm disposition will not add to the production.

Potatoes: Production, quantity available for sale and merchantable stocks in the 36 Late and Intermediate States - 1939-1954

Crop of	Production		Available for sale	January 1 2/ merchantable stocks	Jan. 1 stocks as percent of production in 36 States
	United States	36 States	36 States 1/	following year	
	(1)	(2)	(3)	(4)	(5)
	- Million bushels -				- Percent -
1939	342.4	295.6	196.3	93.4	31.6
1940	376.9	328.1	220.3	109.1	33.3
1941	355.7	308.2	212.3	100.6	32.6
1942	368.9	315.9	221.1	97.9	31.0
1943 2/	458.9	393.6	283.8	131.7	33.5
1944	383.9	326.4	249.2	104.0	31.9
1945	419.4	356.4	275.7	120.5	33.8
1946	487.3	405.7	328.0	154.5	38.1
1947	389.0	329.5	268.3	121.9	37.0
1948	449.9	384.9	322.5	136.6	35.5
1949	402.4	342.8	282.1	151.0	44.0
1950 3/	429.9	366.1	306.6	161.6	44.1
1951	320.5	271.3	224.7	93.9	34.6
1952	349.1	296.6	248.9	113.5	38.3
1953	380.1	314.5	263.2	128.3	40.8
1954 4/	355.1	303.2	249.4	118.2	39.0

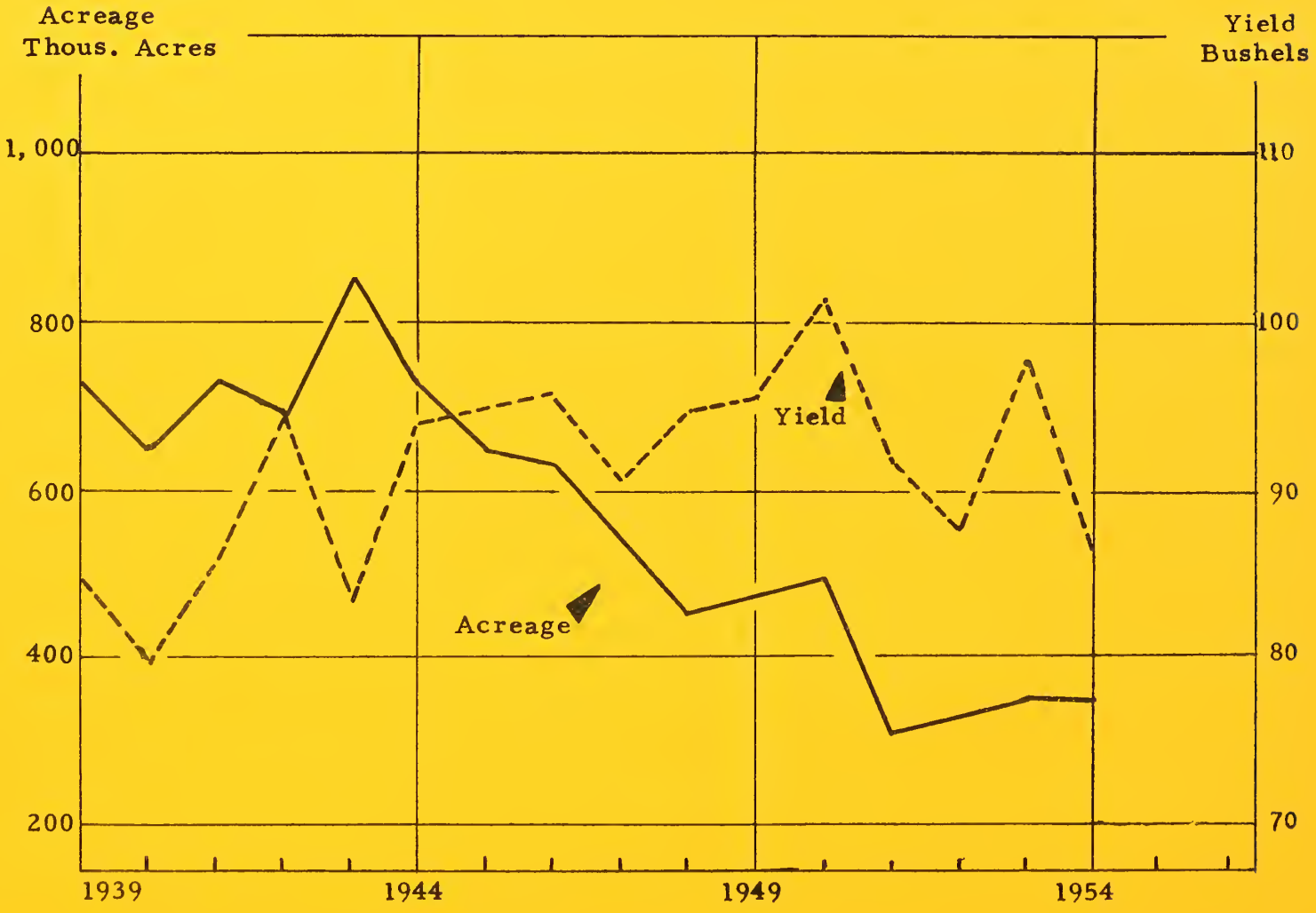
1/ Total sold for season. 2/ Production includes the following quantities left in the ground because of low prices (1,000 bu.): 1943, Oregon 440.
3/ Production includes 65,000 bushels of the early commercial crop in Nebraska not marketed and excluded in computing value.
4/ Preliminary.

PRODUCTION CONSIDERATIONS IN THE 1956 SWEETPOTATO OUTLOOK



Prepared for the 33rd National Outlook Conference, Nov. 28 - Dec. 1, 1955, by the Fruit and Vegetable Statistics Branch, Agricultural Estimates Division, Agricultural Marketing Service, U. S. D. A.

SWEETPOTATOES - ACREAGE HARVESTED AND YIELD PER HARVESTED ACRE



PRODUCTION CONSIDERATIONS

IN THE 1956 SWEETPOTATO OUTLOOK

Background: Acreage of sweetpotatoes has been on a downward trend since 1932 when the record high 1,059,000 acres were harvested. By 1939, the acreage dropped to 728,000. This decline continued steadily until 1951 except for the war year of 1943 when 856,600 acres were harvested. In 1951, the low record of 314,000 acres was reached. Since 1951, acreage has been on a slightly higher level and in 1955 is estimated at 338,700 acres.

Unlike Irish potatoes, where a drastic decline in acreage was accompanied by a phenomenal increase in yield per acre, the sweetpotato yield has shown no pronounced trend in recent years. The average yield per acre for the 5-year period 1950-54, at 93 bushels, is only moderately higher than the 1939-43 average of 86 bushels.

Production of sweetpotatoes has declined drastically since World War II, dropping from 60,825,000 bushels in 1946 to 29,880,000 bushels in 1954. For 1955, the crop is estimated at 36,101,000 bushels.

The pattern of acreage changes since 1939 has been characterized by drastic decreases in the non-commercial States and by moderate to big decreases in most commercial States except New Jersey, Louisiana, and California. New Jersey acreage has increased moderately; Louisiana and California show about the same acreage as in 1939. The number of farms growing sweetpotatoes in the United States dropped from 1,163,719 in 1939 to 785,983 in 1949, according to the Federal Census. Decreases were reported in each sweetpotato State. The current commercial nature of the crop is evidenced by the fact that in 1949 the Census reported about 75 percent of production grown on only 15 percent of the farms--those farms having 1 acre or more of sweetpotatoes. Also, sales have increased from 40 percent of the crop in 1939 to 57 percent in 1954.

Traditionally, sweetpotatoes have been popular as a "depression" crop. When employment opportunities have been limited and it was necessary for rural families to grow more of their food requirements, they have relied heavily on the sweetpotato as a source of home-grown food. This was shown during the depression period of the early 1930's when acreage was at the highest level of record. Conversely, the smallest acreages of record were planted during the prosperous years of 1951 to date. In view of the fact that the production of sweetpotatoes requires a large amount of hand labor, it appears that many rural families prefer to buy their supplies in times of high employment. The decrease in the number of farm families growing sweetpotatoes also has been augmented by the migration of large numbers of share croppers to industrial areas.

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The decline in commercial acreages in many States probably has been accentuated by high labor requirements and the expense of providing the kind of storage facilities that are required to hold stocks in good condition. Further, despite the fact that intermittently good prices have temporarily stimulated production in various sections of the country, market demand for sweetpotatoes has not been consistently strong enough to encourage any appreciable expansion in the overall commercial crop. It appears that any deviation from the downward pattern of production sharply affects the prices received by the farmer, particularly during recent years. For example, in 1950 production rose 11 percent above the previous year while the average price dropped 23 percent. By contrast, production in 1951 dropped 42 percent and the average price increased 85 percent. Production in 1955, which is estimated to be the largest since 1950, is likewise having a depressing influence on prices received by growers.

Sweetpotatoes: Acreage, yield, and production, United States, 1939-54

Crop of	Planted Acreage	Harvested Acreage	Yield per Acre	Production
	Thousand Acres	Thousand Acres	Bushels	Million Bushels
1939	735.0	728.0	84.8	61.7
1940	651.7	647.7	79.8	51.7
1941	730.9	730.9	85.5	62.5
1942	688.0	687.0	95.3	65.5
1943	369.7	856.6	83.1	71.1
1944	732.1	726.0	94.0	68.3
1945	652.0	645.9	94.8	61.3
1946	643.1	637.0	95.5	60.8
1947	562.7	546.6	90.8	49.6
1948	461.4	455.3	94.6	43.1
1949	478.2	472.1	95.3	45.0
1950	501.5	492.4	101.2	49.8
1951	320.5	314.0	91.7	28.8
1952	333.4	324.8	87.8	28.5
1953	357.2	350.8	97.7	34.3
1954 1/	354.0	345.5	86.5	29.9

1/ Preliminary.

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Sweetpotatoes: Production and farm disposition, United States, 1939-54

Crop of	Production	Total used for seed	Farm disposition 1/			
			Used on farms where grown			Sold
			For seed	Fed to livestock, shrinkage, and loss after harvest	For farm household use	
	- Thousand Bushels -					
1939	61.7	3.3	2.5	12.0	22.8	24.5
1940	51.7	3.7	2.8	8.5	19.0	21.4
1941	62.5	3.5	2.7	12.5	22.1	25.3
1942	65.5	4.4	3.3	13.0	21.9	27.2
1943	71.1	3.8	2 9	15.8	23.8	28.7
1944	68.3	3.3	2.5	13.6	21.3	30.9
1945	61.3	3.3	2.5	11.3	19.8	27.7
1946	60.8	2.9	2.1	12.0	18.9	27.8
1947	49.6	2.4	1.7	11.6	15.5	20.8
1948	43.1	2.5	1.9	8.4	13.5	19.3
1949	45.0	2.8	2.1	8.9	13 1	20.8
1950	49.8	1.7	1.3	12.3	12.7	23.5
1951	28.8	1.9	1.3	4.2	8.1	15.1
1952	28.5	2.0	1.4	3.9	7.3	15.9
1953	34.3	2.0	1.5	5.4	7.5	19.9
1954 2/	29.9	2.0	1.5	4.7	6.8	16.9

1/ In some years, due to rounding farm disposition will not add to the production

2/ Preliminary.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Foreign Agricultural Service
Washington 25, D.C.

November 15, 1955

EXPANDING FOREIGN MARKETS

For

FRUITS AND VEGETABLES

Program Objectives

1. To obtain access to foreign markets on an equal basis with foreign competitors for United States fruit and fruit products.

2. To assist the United States fruit industry to develop and maintain improved foreign markets for fruit and fruit products.

Significance of Export Outlet to the United States Fruit Industry

Exports of United States fruits and fruit products have provided a substantial outlet for the United States fruit industry for many years. Prior to the war, almost 14 percent of all sales of United States fruit and fruit products were made to foreign markets. In that period, almost 9 percent of the sales of fresh fruit was shipped to export outlets, whereas over 23 percent of the total sales of processed fruit went for export. During the last 3 years, only about 8 percent of the sales of both fresh fruit and processed fruit products were made to export outlets.

The export market for citrus fruit grown in the United States has increased along with the domestic market. Exports of fresh citrus fruit to Canada, which is our largest customer, and to Europe now are larger than before the war. Percentagewise, about the same share of total sales - 9 percent - is made in export markets as before the war. In fact, the percentage of fresh fruit sales made to export outlets has increased since the prewar period, while the percentage of processed citrus sales made in export channels is about half of its prewar level.

Exports of fresh and processed United States deciduous fruits, however, have been reduced sharply since before the war. Prior to the war, over 8 percent of all fresh deciduous fruit sales and over 25 percent of all processed deciduous fruit sales went to export markets. At the present time, only about

Prepared for the Fruit and Vegetable Commodity Sessions of the 33rd Annual Agricultural Outlook Conference, November 28-December 1, 1955.

3 or 4 percent of the fresh deciduous fruit, and about 12 percent of the processed deciduous fruit are exported. Formerly, about 17 percent of all United States canned fruit sales went to export markets, whereas recently about 3 or 4 percent have been sold in these markets. Dried fruits have fared a little better, recently exporting about 1/5 of their total sales, as compared to 1/3 of the total dried fruit sales being exported prior to the war.

United States Share of World Fruit Production

The United States is the world's most important fruit producer. Between 1/5 and 1/6 of the total production of fruit in the world is grown in the United States.

Nearly 1/2 of the world citrus fruit production is located in the United States. Over 1/3 of the oranges, about 1/2 of the lemons, and over 9/10 of the grapefruit grown in the world, are grown in the United States. The Mediterranean area, which produces almost as many oranges and lemons as this country, provides our greatest competition. Production of oranges in foreign countries is expanding about as rapidly as in the United States.

The production of deciduous fruit has been decreasing slightly in the United States since the prewar period, whereas the total world production of deciduous fruit is about 1/5 larger now than it was prior to the war. There have been sharp increases in production of apples and pears in the Northern European countries and of soft fruits as well in the Mediterranean countries, since the prewar period. Production of apples and pears in Europe as a whole, for example, currently is about twice the prewar average. There have been important increases also in the production of apples and pears in South America and the Union of South Africa. Before the war, United States deciduous fruit production accounted for 1/3 of the world total, whereas the United States share has dropped to 1/4 of the total in recent years.

Production of canned fruits in Australia and South Africa has been increasing rapidly since the war. These increases, plus small increases in production in European countries, have offset the sharp decline in Malayan pineapple production since the prewar days. United States canned fruit production provides slightly more than 3/4 of the world total.

Almost 1/2 of the world total of dried fruit production is produced in the United States. Important foreign competition is provided by the Mediterranean areas, Greece, Yugoslavia, Turkey, and Persia, and by Australia and South Africa. The United States produces about 1/3 of world raisins, and about 4/5 of the total world prune production.

Information relating to the United States share of world production and trade for the major fruit categories is provided in Tables I and II.

Table I

United States Share of World Production,
Average 1934-38, annual 1951-54

Crop season	Citrus and deciduous fruit	Citrus fruit	Deciduous fruit 1/	Canned fruit 2/	Dried fruit 3/
	- - Percent - -				
Average 1934-38	35	40	33	78	48
1951...	36	46	32	78	47
1952...	29	43	24	76	48
1953...	31	45	24	76	40
1954...	31	45	24	72	39

1/ Excluding grapes crushed for wine.
2/ Excluding citrus.
3/ Excluding dates and figs.

Table II

United States Share of World Trade,
Average 1934-38, Annual 1951-54

Crop season	Citrus fruit	Deciduous fruit	Canned fruit 1/	Dried fruit 2/
	- - Percent - -			
Average 1934-38	12	27	44	36
1951...	17	12	15	22
1952...	16	9	22	32
1953...	17	8	18	25
1954...	17	10	23	22

1/ Excluding citrus.
2/ Excluding dates and figs.

Destination of Exports

Europe and Canada have provided the principal outlets for exports of United States fruit and fruit products. Information relating to the share of the total sales of principal United States fruit and fruit products made to these respective markets is provided in Table III.

Table III

Share of Major United States Fruit Groups Exported,
by Principal Destinations,
Average 1934-38, Annual 1951-54

Fruit groups and crop season	Exports			
	Total	Europe	Canada	Other
	- - Percent of total sales - -			
Fresh				
Apples, grapes, pears, plums, and prunes:				
Average 1934-38	10.9	8.5	1.0	1.4
1951	6.0	1.7	2.0	2.3
1952	4.3	.1	2.4	1.8
1953	4.4	.3	2.6	1.5
1954	5.1	.7	3.0	1.4
Citrus:				
Average 1934-38	8.2	3.2	4.5	0.5
1951	10.7	2.7	7.1	.9
1952	12.3	4.1	7.3	.9
1953	12.4	4.1	7.6	.7
1954	12.4	4.4	7.2	.8
	- - Percent of total pack - -			
Canned fruit 1/				
Average 1934-38	17.2	16.3	0.1	0.8
1951	2.7	.6	1.0	1.1
1952	3.5	.7	1.5	1.3
1953	4.2	1.7	1.4	1.1
1954	4.4	1.5	1.5	1.2
Dried				
Apples, apricots, figs, peaches, pears, prunes, and raisins:				
Average 1934-38	36.1	30.1	2.7	3.3
1951	30.1	22.1	4.1	3.8
1952	33.3	25.3	4.0	4.0
1953	26.2	18.8	4.3	3.1
1954	22.8	14.4	4.8	3.6

1/ Deciduous only.

Barriers to Trade

In recent years, exports of most United States fruits and fruit products to European markets have been well below their prewar levels. Exceptions to this

are found in the case of raisins and oranges, but imports of most other United States fruits and fruit products have been either prohibited or sharply limited by European and other foreign countries since the war.

Following the war, practically all European countries imposed rigorous controls on imports of goods from the dollar area in order to preserve their dollar balances. In the immediate postwar years, only the most essential goods were permitted to be imported from the dollar area. Generally speaking, fruits and fruit products were considered to be luxuries and were low in the scheme of priorities established for imports.

As European economies have improved, there has been some liberalization of imports of fruits and fruit items from the United States. Recent steps toward liberalization of fruit items, and the current limitations affecting imports of United States fruits into European countries is summarized in the following schedule:

Liberalization Moves in 1955

Austria.--Effective July 17, Austria increased its liberalized import list. Fruit products in this list of interest to the United States include fresh lemons, canned pineapples, guavas, grapefruit and peaches; canned pineapple and grapefruit juices; other canned fruit and berry juices, unconcentrated and unsweetened; and canned olives.

Denmark.--Raisins were placed on the import free list in Denmark effective November 1. This is the only dollar fruit item now liberalized.

Germany.--On July 1, Germany liberalized imports of canned grapefruit and plums in barrels, without sugar. Free dollar quotas were established for imports of dried fruits and nuts, and canned pineapple for the last quarter of 1955. Further liberalization has been promised for early 1956, especially for canned asparagus, and citrus fruits and juices.

New Zealand.--Effective in February, New Zealand removed her import restrictions on dried prunes and fruit pulps.

Status of Other European Countries

Benelux.--Fresh fruits, canned fruit juices, and dried fruits are licensed--other fruit and tree-nut items liberalized.

Finland.--United States goods are under strict import controls.

France.--All dollar imports under license.

Ireland.--All dollar imports subject to license.

Norway.--Strict control of dollar imports.

Sweden.--Most products are liberalized, although some items, principally fresh fruits, must be purchased with transit dollars. Seasonal prohibitions also in effect for fresh apples and pears.

Switzerland.--Largely liberalized.

United Kingdom.--Dollar fruits and fruit products under import license control.

The United Kingdom, which in prewar times was the most important European customer for United States fruits, has taken increased quantities of fruit items in the past two or three seasons. Most of these exports, however, were financed under aid programs.

Problems relating to barriers to trade, such as tariffs, quotas, import license, exchange restrictions and others, are considered and discussed at an international forum referred to as the GATT, which is of special interest to the United States fruit industry.

GATT

United States Government representatives will talk to other government representatives in Geneva during November about import restrictions which foreign governments are imposing upon United States exports, and will press for relaxation of these restrictions. These discussions will take place at the 10th Session of the General Agreement on Tariffs and Trade, commonly known as the GATT. This agreement was made effective in 1948, and is currently signed by 32 countries. The GATT essentially is an agreement to reduce import duties and to prevent impairment of world trade by quotas, subsidies, or other devices.

The GATT provides a set of rules of conduct in international trade to which the member countries subscribe. It also provides some conditions under which these rules need not be lived up to by the member countries.

For example, one of the rules is that no member country may discriminate against imports from another member country. The exception is that when member countries have difficulties in maintaining dollar balances, they may discriminate against imports from the dollar area in order to preserve their dollar balances. European countries have discriminated against imports of dollar fruits since the war, and in so doing they have protected the fruit-producing industries of their countries, which have increased their production substantially in the last several years. Similarly, the same conditions have held for production in colonies of European countries.

At some of the discussions at the GATT session in Geneva this past winter, it was apparent that these fruit-producing industries in foreign countries intended to insist upon continuation of these conditions. It was quite apparent that the member countries were unwilling to allow world supply conditions to have an immediate and substantial effect upon domestic prices. The delegates were anticipating improved dollar balances and freer trade with the dollar area in the future. It was evident that quantitative restrictions for balance-of-payment reasons could not be continued much longer and foreign countries were looking for such measures without the balance-of-payment rationalization. Member countries obtained waivers exempting them from being bound by certain provisions of the GATT in order to prevent domestic or colonial industries from being sharply hurt by increased imports from the dollar area. These will be of considerable importance to the fruit industry.

These waivers have some aspects which are favorable from our point of view. First of all, the problem which we have long insisted to be the real issue is recognized. Furthermore, any country in order to obtain a waiver, must apply for it and in its application present a program designed to reduce gradually the protection provided. Thus, some limits are placed upon the use of these waivers which may be of help in reducing the amount of protection currently enjoyed by our foreign competitors.

The Agricultural Trade Development and Assistance Act of 1954

This Act (Public Law 480, 83rd Congress) provides a means whereby some of the surplus agricultural commodities produced in this country may be exported to other countries which currently are unable to pay for them with dollars. Programs developed under Public Law 480 involve agreements providing for the importation of surplus agricultural commodities and for the expenditure of the foreign currency received by the United States in exchange for the surplus agricultural commodities.

Thus far, there have been no fruits or fruit products included in programs developed under Public Law 480. Fruit items have been mentioned in the course of negotiations with some countries, and some limited quantities of fruits may be exported under such programs during the 1955-56 crop season.

Section 402 of the Mutual Security Act of 1954

The program under which most United States fruit items have been imported into the United Kingdom is that administered by the ICA. In 1953-54, importation of $10 million worth of surplus United States fruits and fruit products was authorized under Section 550 of the Mutual Security Act of 1953. A similar program authorized under Section 402 of the Mutual Security Act of 1954 provided funds for the importation of about $15 million worth of surplus United States fruits and fruit products. Currently, some $20 million has been set aside for the importation of fresh and processed United States fruit items into the United Kingdom. These programs provide for defense expenditures by foreign countries and include the proviso that part of the funds should be furnished in terms of surplus agricultural commodities rather than dollars.

Tree Nuts

The United States produces between 1/4 and 1/5 of the world's commercial production of edible tree nuts 1/. The United States is the sole commercial producer of pecans in the world. Over 3/5 of the world's walnuts are grown in the United States, the balance being produced principally by France and Italy, and to a lesser extent by Turkey and Yugoslavia. About 15 percent of the almonds are grown in the United States, with the balance produced in the Mediterranean area, chiefly Italy and Spain. Less than 10 percent of the world filbert output is produced in this country; Turkey is the main producer; Italy and Spain and the United States contribute the remainder. Cashew nuts from India and Mozambique, Brazil nuts (from Brazil), and pistachios from the Mediterranean, contribute the balance of the world's tree-nut supplies. In normal years, imports of tree nuts into the United States average between 75 and 80 percent of the total United States tree-nut production.

1/Only almonds, Brazil nuts, cashews, filberts, pecans, pistachios and walnuts are considered here.

Section 22 Activities

Section 22 of the Agricultural Marketing Agreement Act of 1937, as amended, provides a means for limiting imports of agricultural commodities if they offset regulations established under programs of the Department.

For example, it would be difficult if not impossible, to improve returns to walnut producers by limiting sales of domestic walnuts if unrestricted imports offset the reduction in domestic supplies as a result of the program.

Since the 1951 season, there have been limitations upon the imports of almonds or imports of almonds and filberts each season. These limitations have usually been established in the form of a quota fee, i.e., a fee has been imposed upon all imports above an established quantity.

At the present time, there are no quota fees for these items. Marketing conditions in prospect for the 1955-56 year are such that no recommendations for such action have been made by the Department.

Export Outlets for Vegetables

A very large portion of all fresh vegetable exports are to Canada. The next most important customer is Cuba. There are no dollar or exchange problems with these countries. A very small volume of fresh vegetables are shipped to Venezuela, Mexico, and the Central American countries. Exports of fresh and frozen vegetables have shown substantial increases in recent years. Further increases can be expected, if prosperity and population increases in Canada continue.

Exports of canned vegetables are relatively insignificant when compared to the total pack. The principal export items are tomato juice, tomato paste and puree, asparagus and peas, listed in the order of importance. Canned vegetables are exported to a large number of countries. The same problems on import controls and restrictions that European countries apply to processed fruits also apply to processed vegetables.

Vegetable Imports

Most of the imported fresh vegetables, except potatoes, originate in Mexico and Cuba during the winter months. Fresh tomatoes from Mexico are usually the largest in volume, followed by rutabagas from Canada, peppers from Mexico, and cucumbers from Cuba. Onions from Chile and Egypt may become important in seasons when United States prices are unusually high. Potato trade, mostly between the United States and Canada, generally balances out at 2.5 to 3 million bushels annually. However, during short crop years in either country, imports to the country with the smaller crop may reach 5 million bushels.

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UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. FOREIGN AGRICULTURAL SERVICE
November 14, 1955

33rd Annual Agricultural Outlook Conference

WORLD PEANUT PRODUCTION AND TRADE

World production of peanuts in 1955 is forecast at about 12 million short tons in the shell. Prewar production averaged about 9.6 million tons. Production in 1953 and 1954 averaged about 11.5 million tons. The United States ranks fifth in world production. Nigeria and French West Africa are also expected to have larger crops comparable to 1953. India and China, as well as other important producers, are expected to produce about the same as in 1954.

Most of the world's peanuts are produced by hand methods. Until power and modern equipment are successfully introduced into the great producing areas, only slow changes in world production are expected and production from year to year will continue to fluctuate mainly due to rainfall.

Peanuts are one of the world's most important oilseeds, being used for food both directly as well as in many processed forms and preparations. They are a main source of edible oil. In many meat deficient areas peanuts are also an important source of protein. They supply an important part of the world's livestock feed.

Only in the United States are peanuts grown mainly for direct use as food. Most of the 2.2 million tons equivalent of peanuts and peanut oil which enter world trade, are exported as shelled peanuts for crushing or as peanut oil. India, previously the world's largest exporter, has retained almost all its production for local use in recent years. Nigeria and French West Africa are now the largest exporters. An increasing proportion of the exports are in the form of oil and cake.

The United States, which has a price support program for peanuts is not normally an importer. However, the small crop of 1954 necessitated the relaxation of import controls. According to Census Bureau data, imports for the 13 month period ending July 31, 1955, totalled 120,104,618 pounds of shelled peanuts. Of this total 77.5 million pounds entered in June and July, 1955. These imports were sufficient to meet consumption requirements until the new crop came on the market.

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. FOREIGN AGRICULTURAL SERVICE
November 15, 1955

33rd Annual Agricultural Outlook Conference

WORLD FATS AND OILS PRODUCTION AND TRADE 1/

World production of fats and oils, which decreased sharply during World War II now exceeds prewar production. Production averaged about twenty-four million short tons during 1935-39 and has been above that level in recent years. It is estimated twenty-eight million tons were produced last year.

Great increases in production have occurred in the case of the oilseeds, both annual and palm type. Production of cottonseed oil, peanut oil and soybean oil in 1954 are estimated to be more than one-third greater than prewar. Rapeseed oil and palm oil (both of which are important food oils in many foreign countries) were produced in 1954 at levels over one-fourth greater than prewar, a far larger and increasing proportion of palm oil is now of edible grade. Though the production of sunflower seed oil has receded from the high of the early 1950's due to smaller crops in South America, it was still about one-half greater in 1954 than in the 1935-39 period. Olive oil production, though lower in 1954 (and probably also in 1955), has averaged well above prewar in the last five years.

Among the animal fats there have also been considerable changes in production. Butter production is about 8 percent less than prewar, while lard is about 15 percent more. Tallow and grease production has reached a level nearly three-fourths more than prewar.

Other major items, such as linseed oil and whale oil, have been produced at somewhat below prewar levels. In the case of linseed oil, this has been due mostly to smaller crops in the Argentine. Whale oil production has been limited by the international convention. Although world castor oil production is somewhat above prewar, the total production of industrial oils has been somewhat below prewar. Larger castor oil production has been mainly due to increases in India, though it is greater than prewar in a number of minor producing countries.

Except in the case of Argentina, Eastern Europe, China and the U.S.S.R., there has been an upward trend in production of fats and oils throughout the world. Most notable is the tremendous increase in production in the United States. Production which averaged about 7.4 billion pounds during 1935-39, was increased to an average of about 9.8 billion during 1942-45, and is estimated to have averaged about 13 billion pounds during 1954 and 1955. This is about one-fourth of total world production in recent years. The United States has become the world's largest producer and exporter of fats and oils.

1/ In terms of the fat or oil equivalents.

Several circumstances have brought about this development. During the war there was a large scale development of production to replace imports into the United States and allied countries. This production was continued during the early post war period when there was both a deficit in war damaged areas and a severe cutback in supplies previously available to them from Asia, mainly India, China and Manchuria

World exports of the last five years have been characterized by several changes from the prewar pattern. There has been a considerable reduction in trade in peanuts, due mainly to retention of almost the entire Indian crop in that country and to increased export as oil from West Africa. A notable decrease has occurred in exports of China - Manchurian soybeans and oil, which has been compensated to a large extent by increased exports from the United States. Trade in cottonseed and cottonseed oil expressed as oil equivalent has not changed much as to quantity from prewar. However, in 1954, there was a substantial increase in cottonseed oil exports due mainly to larger exports from accumulated stocks in the United States. World sunflower seed and oil exports have been substantially lower in recent years due mainly to reduced production in Argentina.

Olive oil trade is below that of prewar, due in part to greater retention in producing countries, but mainly to damage to trees by freezing and unfavorable growing seasons in some areas in the last two years.

The greatly increased trade in flaxseed and linseed oil during 1954 and so far this year has reduced stocks both in Argentina and the United States. Reduced production and export supplies from Argentina are about offset by increases in the United States and Canada. With continued high level of world demand, the export outlook for flaxseed is good for 1955-56.

The outlook is for a continued high level of world trade in fats, oils, and oilseeds during 1955-56. Economic activities in major market area, such as Western Europe are expected to continue at a high level. There is a continuing low production of olive oil in Spain and of sunflower seed and oil in South America. Stocks in a number of countries have been reduced in recent years and are in need of replenishment. Import demand is strengthened by growing population and by improved standards of living in many foreign countries.

As far as the United States is concerned, it appears export of oil and oilseeds in 1955-56 will be about as large as in 1954-55. Government holdings will be kept to a minimum by commercial sales, and by the opportunity for foreign sales for local currencies under the provisions of Public Law 480. It is expected there will continue to be a strong export market for edible vegetable oils under these programs.

The Agriculture Trade Development and Assistance Act of 1954, (Public Law 480) authorizes the sales of agricultural commodities for foreign currencies. This program is carried out through private trade, which receives payment in dollars from the United States Government. The foreign currencies may be used by this government for the further development of markets in the foreign countries purchasing U.S. agricultural commodities, and for other purposes. Under this program, purchase

authorizations have been issued to foreign countries for more than 250 million pounds of cottonseed and soybean oils (crude, semi-refined and refined) and lard. Authorizations issued this crop year amounted to about 100 million pounds at the middle of November.

It is expected that during the balance of the year, other agreements will be entered into which will provide for sales of additional substantial amounts of fats and oils under this authorization. It is expected sales under this program will tend to strengthen foreign consumption requirements, since these sales are in addition to normal dollar purchases.

Table 2 - FATS, OILS AND OILSEEDS: Estimated world production, averages 1935-39 and 1945-49, annual 1951-1954

(1,000 short tons)

Commodity	Total in fat or oil equivalent					
	Average					
	1935-39	1945-49	1951	1952	1953	1954 1/
Edible vegetable oils 2/:						
Cottonseed	1,720	1,345	1,905	1,905	2,020	2,285
Peanut	1,665	1,880	1,920	1,875	2,050	2,050
Soybean	1,355	1,615	1,860	1,975	1,905	2,095
Sunflower	620	830	1,050	950	940	920
Olive oil	970	915	1,525	830	1,265	940
Sesame	720	705	735	765	755	760
Total	7,050	7,290	8,995	8,300	8,935	9,050
Palm oils 3/:						
Coconut	2,140	1,630	2,250	2,075	2,070	2,150
Palm kernel	400	335	415	425	445	470
Palm	1,090	1,000	1,220	1,270	1,345	1,385
Babassu kernel	30	20	40	30	30	35
Total	3,660	2,985	3,925	3,800	3,890	4,040
Industrial oils 2/:						
Linseed	1,145	1,100	1,055	1,100	1,060	1,120
Castor bean	200	210	230	230	240	235
Rapeseed	1,330	1,575	1,655	1,815	1,630	1,660
Oiticica	10	12	12	5	9	10
Tung	150	118	128	126	123	105
Perilla	65	5	5	6	6	5
Total	2,900	3,020	3,085	3,282	3,068	3,135
Animal fats:						
Butter (fat content)	4/4,280	5/3,450	3,640	3,640	3,860	3,960
Lard	3,500	3,070	4,040	4,210	4,000	4,015
Tallow and greases	1,550	2,000	2,350	2,420	2,720	2,760
Total	9,330	8,520	10,030	10,270	10,580	10,735
Marine oils:						
Whale	545	280	435	460	420	455
Sperm whale	30	40	120	85	55	75
Fish (incl. liver)	480	275	475	445	460	510
Total	1,055	595	1,030	990	935	1,040
Estimated world total	23,995	22,410	27,065	26,642	27,408	28,000

1/ Preliminary. 2/ In the case of vegetable oilseeds, oil production has been estimated by assuming for each of the various crops that a certain proportion was crushed for oil. The years shown refer to the years in which the seed was produced and not necessarily when the oil was extracted. 3/ Estimated on the basis of exports and the limited information available on production and consumption in the various producing areas. 4/ 1934-38 average. 5/ 1946-49 average.

Foreign Agricultural Service, Fats and Oils Division

Table 1 - FATS, OILS AND OILSEEDS: World exports 1/, averages 1935-39 and 1945-49, annual 1952-54, and forecast 1955.

(1,000 short tons)

Commodity	Total in fat or oil equivalent					
	Average		1952	1953	Estimate	Forecast
	1935-39	1945-49			1954	1955
Edible vegetable oils:						
Cottonseed	190	80	120	160	415	430
Peanut	852	480	560	625	730	675
Soybean	440	135	335	390	440	570
Sunflower	36	75	50	55	35	20
Olive oil	170	50	85	95	130	100
Sesame	65	30	60	95	60	60
Total	1,753	850	1,210	1,420	1,810	1,855
Palm oils:						
Coconut	1,290	865	1,295	1,170	1,290	1,290
Palm kernel	360	310	395	415	440	440
Palm	735	350	570	605	635	640
Babassu kernel	20	18	2/	2/	2/	10
Total	2,205	1,543	2,260	2,190	2,365	2,380
Industrial oils:						
Linseed	714	280	225	329	670	450
Castor	101	98	126	130	114	120
Rapeseed	60	35	70	115	45	50
Oiticica	4	11	6	6	6	6
Tung	3/ 89	55	48	50	50	54
Perilla	40	2/	2/	2/	2/	2/
Total	1,008	479	475	630	885	680
Animal fats:						
Butter (fat content)	4/ 460	5/ 315	370	390	420	455
Lard	180	280	360	275	290	330
Tallow and greases	245	170	520	775	755	800
Total	885	765	1,250	1,440	1,465	1,585
Marine oils:						
Whale	545	280	460	420	455	415
Sperm whale	30	40	85	55	75	85
Fish (including liver)	135	85	130	195	215	210
Total	710	405	675	670	745	710
Grand total	6,561	4,042	5,870	6,350	7,270	7,210

1/ Revised. 2/ Less than 500 tons. 3/ 1933-37 average. 4/ 1934-38 average 5/ 1946-49 average

Foreign Agricultural Service, Fats and Oils Division Revised 11-14-55.

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Foreign Agricultural Service
November 28, 1955

33RD ANNUAL AGRICULTURAL OUTLOOK CONFERENCE

OUTLOOK FOR WORLD PEANUT PRODUCTION AND TRADE - 1955-56

World production of peanuts in 1955 is forecast at 12 million short tons of nuts in the shell, on the basis of preliminary data now available. This would be an increase of 590,000 tons from the 1954 revised estimate. The expected increase is explained largely by the recovery of the United States crop and the expectation of larger crops - possibly reaching the high level of 1953 - in French West and British West Africa. In India and China, production in 1955 is believed to have approximated last year's outturn of 4.3 million and 2.4 million tons, respectively.

Farmers in the producing areas of the world, in the main, till the land and care for and harvest the crop with hand tools. Intensive efforts are being made to find ways and means of introducing power and modern equipment into the agricultural life and economy. To the extent this is accomplished, yields and production may be rapidly increased. However, it appears that in the next few years world production of peanuts is likely to remain at about 12 million tons. Annual variations in world production are now largely the result of rainfall in the growing seasons in the various countries.

This expected increase in production in 1955 is not likely to be fully reflected in increased supplies for world trade for several reasons. Population and living standards in producing countries are steadily increasing, so that more of the crop is likely to be retained for local use under normal price relationships. Also, commercial stocks in the Kano, Nigeria area were about 165,000 tons smaller this year than they were last year at the middle of August.

World production of peanuts is estimated to have averaged about 11.5 million tons during 1953 and 1954. There has been a gradual increase from average prewar (1935-39) production estimated at about 9.6 million tons. The United States is the fifth largest producer (875,000 tons in 1955). The largest producer is India (4.3 million tons in 1955) followed by China (2.4 million), French West Africa (990 thousand), and Nigeria (950 thousand).

Peanuts are one of the world's most important oilseed crops. However large quantities are also used for food throughout the world both directly as well as in many processed forms and preparations. As a source of edible oil, peanuts are about equally as important as soybeans and cottonseed. Of the 11.5 million tons of peanuts produced in recent years, only about 2.2 million tons have entered world trade as peanuts or peanut oil. About two-thirds of the exports have been as peanuts and the balance as oil.

The United States is one of the few countries of the world where most of the peanut crop is grown for production of edible peanuts.

World trade in peanuts and peanut oil has undergone a marked change since the prewar period. Total exports on an oil equivalent basis have not recovered to the prewar level of about 850,000 tons, although total production in recent years has exceeded prewar. India, which has continued throughout the years to hold first place as a producer, was in the prewar period by far the leading exporter of peanuts, averaging over 1 million tons (unshelled basis). With increasing domestic consumption needs, peanut exports from India have declined sharply in postwar years, reaching a new low of 13,000 tons in 1954. French West Africa and Nigeria ranked next to India as exporters of peanuts in prewar years. In the postwar period, Nigeria has become the world's leading exporter with shipments in 1954 double the 1935-39 average. French West Africa now rates second place although shipments from that area have dropped to roughly one-half to two-thirds the prewar tonnage. The United States, a net importer in prewar years, ranked third as a world exporter in the early postwar years of 1948 and 1949. However, with limitations on peanut production for oil, 1952 exports declined to less than 1,500 tons. With the sale for export of substantial quantities held by the Commodity Credit Corporation, exports in 1954 recovered to the equivalent of 103,203 tons, unshelled basis. European countries and Canada have continued to be the major importers of peanuts.

China, France, the Netherlands, the United Kingdom, and Denmark were the major exporters of peanut oil during prewar years. Negligible quantities now leave Europe. Moreover, with the expansion of the crushing industry in India, French West Africa and Nigeria, these three countries have emerged as the major exporters of peanut oil. And while Canada, the United States, and Algeria were the leading markets before the war, Europe has taken the bulk of the oil in the postwar period.

An acute shortage of peanuts for edible use in the United States, because of drought last year, prompted the President on May 16, 1955, to issue a proclamation permitting unlimited quantities of shelled peanuts of all sizes to be imported into this country, or withdrawn from warehouse, until July 31, 1955. Earlier, on March 9, the president announced that the import quota for the year ending June 30, 1955, was raised from 1,709,000 pounds shelled basis to 52,709,000 pounds. The additional 51 million pounds was limited to shelled peanuts only. This action was based upon the United States Tariff Commission's second report on peanuts, which was made sometime after it became apparent that the shortage was greater than assumed earlier in the year. The Commission's first report to the President, submitted on February 18, 1955, was the basis for the Proclamation of March 9, 1955.

Entries of the additional 51 million pounds shelled peanuts were subject to an import fee of 2 cents per pound in addition to the 7 cents import duty prescribed by the Tariff Act of 1930. Also, the period during which these peanuts could be admitted was extended one month - through July, 1955. Hereafter, the quota year will commence on August 1, since by this date supplies from the domestic crop are available in volume.

United States imports of shelled peanuts during the period July 1, 1954-July 30, 1955, amounted to 120,104,618 pounds according to official records of the Bureau of the Census. There were no imports of peanuts in the shell in this period. Only 1,662,744 pounds of shelled peanuts were entered during July-December 1954. About 77.5 million pounds, or 65 percent, were imported during June and July, 1955. The remainder, about 41 million pounds, was imported during March-May, 1955.

The largest suppliers were Brazil (34.3 million pounds), India (33.4), Mexico (28.2), Union of South Africa (11.0) and the Philippines (9.3). The remaining suppliers were Egypt, Indonesia, Netherlands, Rhodesia, Canada, Angola and Spain.

The United States is not a large exporter of peanuts. Exports of shelled peanuts amounted to 68,619 short tons in 1954, over 4 times the tonnage exported in 1953 and the largest since 1949. Peanut oil exports, which amounted to only 293 tons in 1953, increased to 4,383 tons in 1954. In terms of unshelled peanuts, the combined 1954 exports of shelled peanuts, unshelled peanuts and peanut oil totaled 118,316 tons compared with 25,355 tons in 1953.

Almost three-fourths of the shelled peanuts went to Europe, with the largest quantities going to Switzerland, the Netherlands and Belgium. Almost 8,000 tons in 1954 went to the United Kingdom, normally not a market for U. S. peanuts. Over 15,000 tons of shelled nuts were shipped to Israel. Over 80 percent of the peanut oil exports also went to Europe--largely to Belgium. Canada was the only other market of any significance.

Prepared by Foreign Agricultural Service to be included in processed material distributed at Outlook Conference, Washington, D. C. beginning November 28, 1955.

UNITED STATES DEPARTMENT OF AGRICULTURE
U. S. AGRICULTURAL MARKETING SERVICE
AGRICULTURAL ESTIMATES
WASHINGTON 25, D. C.

LEGUME AND GRASS SEED OUTLOOK FOR 1955-56

The supply of 27 legume and grass seeds, including 1955 production plus carry-over on June 30, 1955 plus imports for 4 months, July 1 - October 31, for planting during the 1955-56 season totals 1,249 million pounds. This is shown in the accompanying table giving production, carry-over, imports, supply, and domestic disappearance of these seeds for which estimates are made by the Crop Reporting Board. The current supply is 16 percent larger than last year, but is 11 percent below the 1949-53 average, which, as in the case of last year, includes imports for 12 months July 1 - June 30. The 1955 production accounts for nearly four-fifths of the 1955-56 supply and the carry-over a little less than one-fifth. Imports have added on the average only about 5 percent to the domestic supply of the 27 legume and grass seeds. During the period July 1 - October 31 imports were about a fifth below average. The larger production this year than last more than offsets the 14 percent smaller carry-over this year.

Supplies of groups of seeds compared with last year and average

Currently the supply of alfalfa, clovers, and lespedeza seed, estimated at 662.2 million pounds and constituting more than half the total legume and grass-seed supply, is nearly a third larger than last year and about 12 percent larger than the 5-year average. The supply of the 12 grass seeds, estimated at 268.2 million pounds, is about 9 percent larger than last year and 14 percent above average. But the supply (318.9 million pounds) of the winter cover crop seeds-Austrian Winter peas, lupine, crimson clover, vetches, and ryegrasses-is slightly less than last year and 44 percent below average.

Domestic disappearance of 1954-55 compared with other years

During the 1954-55 season an estimated 791.3 million pounds of the 27 legume and grass seeds were sown on about 49 million acres in the United States. This domestic disappearance or consumption compares with 845.3 million pounds last year and the 5-year average of 902.8 million pounds. Decreases in the disappearance of 13 seeds, notably red clover and lupine, during the 1954-55 season more than offset increases over last year in 13 other seeds.

Surplus supply if 1955-56 domestic disappearance equals 1954-55

If domestic disappearance during the 1955-56 season equalled that of the preceding season there would be a surplus of approximately 457.9 million pounds plus the quantity that would be imported November 1, 1955 - June 30, 1956. Such a gross surplus, however, would not allow for any carry-over at the end of the 1955-56 planting season. If this carry-over equalled that of June 30, 1955, the net surplus would be only 220.8 million pounds plus the imports received November 1, 1955 - June 30, 1956. In this case there would

Prepared for the 33d Annual Agricultural Outlook Conference, November 28 - December 1, 1955, by Field Crop Statistics Branch, Agricultural Estimates Division, Agricultural Marketing Service, U. S. Dept. of Agriculture

be a net surplus (i.e. excess of current supply over 1954-55 domestic disappearance plus June 30, 1955 carry-over) of the following seeds in millions of pounds plus imports November 1, 1955-June 30, 1956: Lespedeza (101), alfalfa (59), Sudangrass (35), common ryegrass (33), red clover (22), Austrian Winter peas (11), timothy (8), perennial ryegrass (5), lupine (3), Kentucky bluegrass (1), and redtop (1). On the other hand, there would be net deficits of hairy vetch (14), crimson clover (11), smooth brome (10), red fescue (6), sweetclover (5), purple vetch (4), Ladino clover (3), orchardgrass (2), alsike clover (2), tall fescue (1), and crested wheatgrass (1).

Deficit supply if 1955-56 domestic disappearance and carry-over are average

The 1955 carry-overs of a number of seeds, particularly the fescues, smooth brome, hairy vetch, common ryegrass, alfalfa, crested wheatgrass, and bentgrass were much above average, whereas others, especially Austrian Winter peas, lupine, redtop, common vetch, lespedeza, red clover, timothy, and sweetclover were much below average. If an average carry-over next June were assumed instead of a carry-over equal to that of June 30, 1955, the current supply of the 27 legume and grass seeds would fall short of meeting average domestic requirements by about 24 million pounds. Under these conditions there would not be enough of any of the winter cover crop seeds except the ryegrasses and purple vetch, nor would there be enough red clover, sweetclover, smooth brome, redtop, orchardgrass, white clover, crested wheatgrass, or Kentucky bluegrass. But there would be a surplus of alfalfa, ryegrasses, Sudangrass, fescues, timothy, Ladino clover, bentgrass, purple vetch, and alsike clover.

Most seed prices lower than last year

Prices received by growers for 18 of the 26 legume and grass seeds shown in one of the accompanying price tables are lower than in the fall of 1954. Prices of 23 are below the 5-year average. In mid-October the most marked declines from last year occurred in timothy, tall fescue, Sudangrass, perennial ryegrass, orchardgrass, alfalfa, common ryegrass, redtop, and red clover. Prices of these seeds were a third to a half lower than last year. Growers' prices of only 8 seeds--purple vetch, smooth brome, crimson clover, Austrian Winter peas, common vetch, crested wheatgrass, Ladino clover, and hairy vetch--were higher in mid-October of this year than last year.

Current supply of each seed compared with domestic disappearance

Alfalfa: The total supply of alfalfa seed (1955 production plus carry-over on June 30, 1955 plus imports July 1 - October 31, 1955) for planting during the 1955-56 season is estimated at 270.4 million pounds, as shown in the accompanying table giving supply and disappearance of 27 legume and grass seeds. It is the largest supply of this seed on record, about a fifth larger than last year and three-fifths larger than the 1949-53 average. The current supply is 116.2 million pounds more than the domestic disappearance or consumption last year and 147.6 million pounds more than the 1949-53 average domestic disappearance. So there is more than enough alfalfa seed, particularly of certain improved varieties, than will be needed next year.

Although exports July 1 - September 30 were nearly twice as large as last year for the same period, exports during the remainder of the present fiscal year (ending June 30, 1956) are expected to be much smaller than last year, when supplies of legume and grass seeds in Europe were very short, whereas this year they seem ample for most seeds.

Based on prices growers have been receiving for alfalfa seed this fall, farmers may well expect to pay about a third less for this seed next spring than they paid last spring.

Red clover: The current supply of red-clover seed, estimated at 103.8 million pounds, is 15 percent larger than last year but 23 percent below the 5-year average. With a supply last year a third below average and exports to Europe the largest on record, prices last spring set a record. Chiefly because of the record high price of red clover and the low price of alfalfa seed compared with red clover, domestic disappearance of red clover seed during the 1954-55 season was the smallest during the 16 years of record.

Exports of this seed since July 1 have exceeded imports, but are expected to be much smaller than last year during the remainder of the fiscal year, whereas imports are expected to be much larger than those of last year, when they were the smallest in 8 years.

Currently red-clover seed prices are slightly below average. If domestic consumption during the coming season is average, carry-over will be the smallest in 9 years.

Alsike clover: Although the current supply of alsike clover, including imports, through October 31, is 12 percent less than last year and 8 percent less than average, imports during the rest of the fiscal year could easily offset the apparent deficit. Canada, normal source for practically all our imports of this seed, has a crop this year 50 percent above the 1949-53 average and a carry-over 32 percent above average. These factors, together with a smaller demand in Europe, would tend to stimulate exports to the United States. But the President's Proclamation to increase the tariff on alsike-clover seed from 2¢ to 6¢ a pound on imports when they exceed 2,500,000 pounds during each 12 month period beginning July 1 during the years 1955 and 1956 will affect imports during the rest of the fiscal year as the 2,500,000-pound mark was exceeded as early as October 31.

Currently prices of alsike-clover seed are about a fourth below average. With an average domestic disappearance during the coming season, the carry-over next June would be about average.

Sweetclover: Currently the supply of sweetclover seed which includes imports for only 4 months is 8 percent smaller than last year's supply which included imports for 12 months. Imports have been running much larger than last year, but if they merely equal last year's imports for the remainder of the fiscal year, the total supply of this seed for the 1955-56 season will exceed that of last year by about 7 percent.

The 1955 production plus carry-over in Canada, source of our imports, totals approximately 16.1 million pounds, which is 7 percent smaller than last year.

Carry-over next June in the United States is expected to be slightly larger than this year if domestic disappearance and imports are equal to those of last year.

Sweetclover-seed prices in mid-October were about 14 percent lower than last year and 13 percent below average.

White clover: The supply of white clover seed is slightly larger than last year, but is below average. Imports have been running much smaller than last year and than average. Largely because of the very high price of this seed last spring and the below-average supply, domestic consumption for the 1954-55 season was a third below average. A somewhat larger consumption than last year at prices about a fifth lower is expected.

Ladino clover: Although the current supply of Ladino-clover seed is nearly a fifth smaller than last year, it is more than twice as large as the domestic disappearance during the 1954-55 season. Growers' prices in mid-October were about 15 percent higher than last year but about 40 percent below average.

Lespedeza: Current supply of lespedeza seed, estimated at 188.1 million pounds, is 2 1/3 times as large as the quantity sown last year and about a fourth more than the average consumption. The sharp decline in prices is expected to stimulate the sowing of much more seed next spring than was sown last spring. But because of the much lower prices received by growers this fall there will be less incentive to harvest a seed crop next fall.

Timothy: Supply of timothy seed is 14 percent larger than last year, but is slightly less than average. Imports and exports have been running much smaller than usual. Canada has a large crop--nearly twice the 5-year average. Imports from there are not needed as the United States supply currently is more than a third larger than the domestic disappearance either last season or the average.

Orchardgrass: Currently the supply of orchardgrass seed is about a sixth smaller than last year, but imports, which have been running much ahead of last year and the average, during the remainder of the current fiscal year are expected to raise the total supply above that of last year. Denmark has a large crop of this seed and is expected to export much of it to the United States. Without imports from there, the United States would not have enough orchardgrass to meet average requirements.

Redtop: The current supply of redtop seed is 15 percent larger than last year, but only 43 percent of an average supply. Because of the sharp decline in consumption during the last 2 years, the current supply, although small, appears to be sufficient for prospective 1955-56 requirements.

Kentucky bluegrass: Supply of Kentucky-bluegrass seed is slightly larger than last year, but is 8 percent below average. It is half again as large as the domestic disappearance last year and a fourth more than the average domestic disappearance.

Fescues: The supply each of Chewings, red, and tall fescue seed is smaller than last year, but much above average. Imports of red fescue through October were about a fourth larger than last year for the same period and more than three times the average. It will be necessary to import about 800,000 pounds more of red fescue to have the supply balance domestic disappearance last season. Supply in Canada, chief source for our imports of this seed, is about a fifth smaller than last year, but more than 3 1/2 times the 5-year average. Currently supplies of Chewings and tall fescue are respectively half again to nearly twice last season's domestic disappearance.

Bentgrass: The supply of bentgrass seed is slightly larger than last year and 66 percent larger than average. It is more than ample to meet expected requirements during the 1955-56 season.

Smooth brome: It will be necessary to import 150,000 pounds more of smooth-brome seed from Canada merely to equal last year's below-average domestic disappearance. Through October, imports were average despite the fact that the supply of this seed in Canada is nearly a fourth below average.

Crested wheatgrass: Supply of crested-wheatgrass seed is a fourth smaller than last year and about 40 percent below average. Imports from Canada, only source of our imports, can make up some of the deficit as the 1955 crop there is nearly 2 1/2 times the average.

Sudangrass: Because of the largest Sudangrass-seed crop in 14 years, together with an average carry-over, the current supply is 71 percent larger than last year and 67 percent above average. Although the low price of this seed is expected to stimulate demand during the 1955-56 season, a large carry-over is indicated for next June unless the demand is much above average.

Winter cover crops: Demand for winter cover crop seeds is over until the fall of 1956. Although this fall's supply of each of these seeds, except common and perennial ryegrass, was below average, supplies of Austrian Winter peas, lupine, common vetch, and common and perennial ryegrass were larger than a year ago. Compared with the 1954-55 domestic disappearance, supplies this fall were larger for six of the eight winter cover crop seeds, the two exceptions being crimson clover and purple vetch.

UNITED STATES DEPARTMENT OF AGRICULTURE

COTTON RESEARCH AT THE SOUTHERN UTILIZATION RESEARCH BRANCH OF AGRICULTURAL RESEARCH SERVICE*

The current research program of the Southern Branch to extend and improve the utilization of cotton lint includes investigations of fiber quality as related to improved utilization, and cotton chemical and mechanical processing procedures and products.

Fiber research leads to more uses for cotton

In one line of research fundamental information is being sought as to the mechanism of soiling of cotton fibers. The improvement of cotton as to susceptibility to soiling would be competitive advantage of considerable importance. The necessity of laundering at frequent intervals contributes to the "up-keep" cost in a textile article, and in those for which laundering is not feasible the dry soiling is a feature which in many instances militates against its use. It is estimated by the National Cotton Council that improvement of cotton's soil resistance would effect an annual consumption of approximately 1,450,000 bales valued at nearly $290,000,000 for apparel, household and industrial uses.

A new instrument for measuring the strength and elongation (stretch) of small bundles of cotton fibers in one operation has been designed to aid in the selection of cottons having desired properties for specific textile uses. It was developed at the University of Tennessee Research Laboratory, Knoxville, Tennessee, under a research contract sponsored by the U. S. Department of Agriculture. The development of this instrument makes possible for the first time an evaluation of an elastic property of cotton which, due to the tediousness and time required for its alternative measurement, on single fibers, had been almost totally neglected by breeders, merchants, and textile mills.

This instrument is being used experimentally by certain breeders in the selection of strains of cottons for propagation and by several research laboratories in collecting fundamental information needed to secure the maximum usefulness of cotton's potentially valuable properties. Recent reports have indicated that some 45,000 bales of American cotton were selected in preference to a more expensive foreign cotton on the basis of more favorable elongation performance. Certain commercial laboratories have reported that bundle elongation is now being used to select cottons for industrial fabrics.

In other work, a new type of cotton fiber, one which is tougher, more extensible, more absorbent, and which has a higher dyeing capacity and greater chemical reactivity than ordinary cotton, has been produced on a laboratory scale. These improved qualities were obtained by treating the fiber with a liquid chemical which lowered the crystallinity of the cellulose from 80-90% in the native fiber to 20-30% in the treated fiber. This revolutionary discovery by laboratory scientists has attracted widespread attention. It opens up new possibilities for creating cotton products with improved qualities for certain uses. A public service patent has been granted on the process.

*Prepared for use as background material in the 33rd National Outlook Conference, November 28-December 1, 1955.

Cotton Chemical Processing

Chemical finishing is today largely confined to the laboratory or pilot-plant stages, with only a few of the simpler types of treatment having reached commercial application.

Partially Acetylated Cotton ("PA Cotton"). The making of a new cotton-type fiber from cotton by partial acetylation represents the first practical example of a fibrous chemical derivative developed at the Southern Laboratory. It has received considerable attention by the cotton industry and others during recent years because of its outstanding resistance to deterioration by micro-organisms and heat.

The cotton remains non-toxic and is not changed in appearance. Unlike some processes used to improve cotton's rot resistance, partial acetylation leaves no stickiness, odor, or color. It is believed to be the most effective method developed to protect cotton from rot-causing micro-organisms and from damage by heat. Two firms are now manufacturing this new textile product. It is being marketed under commercial trade names for household ironing board covers and is being evaluated for various other uses by a number of industrial concerns.

Cyanoethylated Cotton ("CN Cotton"). This new cotton product, first announced by the Institute of Textile Technology, is undergoing extensive evaluation in cooperation with the Institute and with cotton mills and chemical companies. Made by treating cotton with acrylonitrile, CN cotton has greater resistance to rot and heat- and greater affinity for certain dyes - than cotton itself.

Carboxymethylated Cotton ("CM Cotton"). This new textile material has been made in pilot plant quantities to obtain the material needed for evaluation. One form of CM cotton is soluble in water. Another has increased affinity for water and certain dyes and chemicals. The second form also has a crisp feeling and is more suitable than cotton for making wrinkle-resistant fabrics.

Aminized Cotton ("AM Cotton"). The discovery at the Southern Regional Research Laboratory of a new and technically feasible process for introducing amino groups into cotton cellulose supplied information having an important bearing on the old problem of how to give wool-like dyeing properties to cotton. Avenues for the improvement of many end-use properties have been opened up by aminized cotton, since the amino groups react readily with many kinds of compounds, making aminized cotton a starting point for further chemical modifications to make cotton water-repellent, weather-resistant, mildew-resistant, crease-resistant, flame-resistant, and the like.

Flame-Resistant Cotton Fabrics. Cotton fabrics with superior flame-resisting qualities have been developed. Treated cloth passes the most stringent laboratory evaluation tests, including the flaming match test, applied to narrow strips of the fabric. Initial resistance to flaming and after-glow is retained after 15 launderings. The superior product is obtained in a one-bath process consisting of a combination of two excellent flame-resisting treatments. These two treatments, identified as THPC and BAP, were also developed at the Southern Laboratory.

Highly Weather-Resistant Cotton by Vat-Dyeing and Acetylation. An extremely promising recent accomplishment which combines resistance to sunlight with mildew- and rot-resistance of partially acetylated cotton consists of pre-dyeing cotton with certain light-stable, nonsensitizing vat-dyes, and following this with partial acetylation. Weather exposure tests indicate that the combination of vat-dyeing with certain colors and acetylating may more than double the outdoor service life compared to cotton vat-dyed only, or acetylated only.

Improved Tobacco Shade Cloth. The service life of cotton cloth used to shade seed beds and growing tobacco plants can be at least tripled by a process developed recently in the Southern Laboratory. Pieces of test cotton fabrics prepared by this process and used to cover tobacco fields in North Florida during the past three seasons still had two to three times as much of their original strength left as did ordinary tobacco shade cloth after only one season's use.

The weather-resistant finish responsible for this increased life is lead-chromate, an inorganic yellow pigment, which screens out the damaging rays of sunlight, one cause of the rapid deterioration of cotton in outdoor use. The basic principles for applying this treatment to shade cloth have proved to be commercially feasible, and the chemically processed fabric is now available for only a slight increase in cost over the untreated cloth. Since fewer replacements of the treated cloth are required, the resultant saving to tobacco growers is substantial, i.e., about $1 million annually.

Cotton Mechanical Processing

Current research in the Cotton Mechanical Processing Section seeks to develop new and improved machinery and processing techniques for more efficient and economical manufacture of high quality cotton yarns and fabrics; to determine the general relationships between fiber, yarn, and fabric properties; and to develop cotton products to meet specific requirements. Examples of recent progress include the following:

Cotton Opener. Before cotton can be processed, that is, cleaned, carded, spun and woven, the matted or compacted masses of fiber must be opened or fluffed up to enable more efficient removal of the foreign matter from the fiber. A new machine developed recently does this better than any other. The machine, which occupies little floor space (6 x 8 feet) and costs about $8,000 can process 2,000 pounds of cotton per hour. With this machine installed in the production line of a cotton mill, more trash -- but less spinnable fiber -- is removed. The savings amount to 50 cents to $1 per bale of cotton processed. The textile industry has already put into use enough of these machines to process 2 million bales of cotton annually, and new machines are being installed at a rate to handle an additional one-half million bales each year. Four companies are manufacturing SRRL Openers for sale. It is estimated that annual savings resulting from the use of these openers is about $2 million.

Improved Cotton Carding. "Carding" is necessary to disentangle individual cotton fibers. In contract research done for the Southern Branch by the Textile School of North Carolina State College, methods were found that greatly increase cotton card production, i.e., by as much as 60 percent. Also, it was found that waste in carding can be reduced about 1 percent by adoption of recommended changes in processing techniques. These changes, if practiced by the entire cotton industry, would result in an estimated saving of 100,000 bales of cotton annually. A number of mills have already benefited through application of these research findings. One medium-sized mill has reported an estimated saving of about $170,000 for the first year by increasing their rate of carding.

Loom Attachment. The SRRL Loom Attachment is a simple, inexpensive, practical device, readily adapted to standard textile looms to facilitate the weaving of abnormally high-density cotton fabrics. Inherently water-resistant fabrics have been woven with pickage increases as great as 40% above the maximum normally obtainable on the loom.

Relatively light-weight high-pickage fabrics fabricated into tarpaulins are being service tested as athletic field covers at the New Orleans Professional Ball Park. Although these covers have been given no water-proofing treatment, whatsoever, they have not leaked after five years service under the local conditions of heavy rainfall.

The development of light-weight extra-dense cotton fabrics is important because cotton fabrics with heavy chemical or other water-proofing treatments are finding increasing competition from lighter weight fabrics of synthetic fibers or plastics. It is well known that nylon and other synthetics have encroached heavily into the market for raincoats, jackets and other garments that must be light in weight and relatively wind and water resistant. The new light-weight extra-dense cotton fabrics should be a major factor in retaining and expanding the market for cotton in this field.

High pickage cotton fabrics have attracted the interest of the Defense Agencies and are being actively investigated for a number of military applications. High pickage cotton fabrics are also being evaluated for tarpaulins, awnings, shelter tents, raincoats, and for a number of applications in the automotive industry. It is believed that the development of these new fabrics will retain and expand the demand for cotton in the industrial fabric market where the use of cotton has been rapidly declining.

The SRRL Loom Attachment is being commercially produced by two equipment manufacturers. The attachment is weaving fabrics on a commercial scale in Canada and Scotland, and is in experimental use in approximately 25 textile mills in the United States.

U.S.Dept. of Agriculture
Foreign Agricultural Service
Grain and Feed Division
Washington 25, D.C.

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THE FOREIGN GRASS AND LEGUME SEED SITUATION

The European seed situation for the 1955-56 season is completely reversed from that of 1954-55. With one of the most favorable harvest seasons in years and a larger seed-crop acreage, supplies are more nearly normal in the producing countries. And in a number of importing countries, production was increased because of the very high price levels that prevailed throughout the 1954-55 season.

In addition to the 1955 production, Europe had an appreciable carry-over from the 1954-55 season. The short supplies and active bidding for those supplies drove prices to such a high level that farmer resistance resulted in a material reduction in seed use, with a consequent unexpected carryover of high priced seed.

Europe's estimates of supplies are not available in terms of quantities at this date because of the almost complete absence of seed crop forecasts. However, estimates obtained from merchants, trade publications and the attaches point to exportable surpluses of most kinds of grass and legume seeds in the surplus producing countries. Denmark has harvested a much larger acreage than normal under favorable weather conditions. In spite of below-average yields, they are believed to have sizeable exportable surpluses of most kinds. The annual ryegrass crop, because of winter freeze injury, is reported to be smaller than normal.

The United Kingdom was also favored with one of the best harvest seasons in years and instead of having to import almost the entire seed requirements as was the case last year, they are offering considerable quantities of a number of kinds for export. Red clover in particular is in larger supply than for some years. Orchard grass and a number of other kinds will be exported to importing countries in competition with supplies from Denmark. Perennial ryegrass is reported to be in large supply in North Ireland, the principal producing area of the United Kingdom.

The French seedsmen also report better harvests this season than last and have estimated that they will have exportable surpluses of several kinds of seeds. The major seed crops available for export from France are: alfalfa, red clover, crimson clover, birdsfoot trefoil, and Mayenne ryegrass.

Prepared for the 33d Agricultural Outlook Conference
November 28 - December 1, 1955.

AEP 195(11-55)

No reports have been received from Italy, normally an important exporter of crimson, Ladino, red clover, and alfalfa. However, commercial sources report the Ladino clover crop to be normal with some 4 or 5 million pounds for export. The Italian crimson clover crop started off under such unfavorable conditions that extensive purchases were made in France. No comments were received as to the alfalfa seed crop, but the red clover seed harvest is indicated to be below domestic requirements.

Ireland, Belgium, Germany, and Switzerland are importers of most of their seed needs. Because of the great drop in world seed prices, it is quite likely that price will determine the source of supply.

The current price levels of seeds, approximately one-half of those of a year earlier, are hard to explain since there is no great surplus of grass and legume seeds. Nevertheless, wholesale seed prices in the producing countries are at low levels. Consumption is likely to be more nearly normal if they are reflected to the consuming farmers.

1. The indicated surpluses of seed give only the one side of the supply-demand picture. The demand phase is not readily obtained at this time.

GRASS AND LEGUME SEEDS

Indicated Exportable Surpluses, 1955-1956

	Country					
	U. S.	Canada	Denmark	France	U. K.	Italy
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	
Alfalfa	75,000	None	None	9,000	None	1/
Clover, Alsike	None	3,500	None	None	None	None
Clover, Ladino	4,000	None	None	None	None	None 2/
Clover, Crimson	None	None	None	7,000	None	3/
Clover, Red	2,000	3,000	3,000	12,000	4/	1/
Clover, Sweet	None	10,000	None	None	None	None
Clover, White	None	None	3,000	-	4/	None
Bluegrass, Kentucky	1,000	None	2,000	None	None	None
Bluegrass, Canada	None	20	None	None	None	None
Bluegrass, Danish	None	None	5,000	None	None	None
Brome, Smooth	None	5,000	None	None	None	None
Fescue, Red	4,000	5,000	5,000	None	None	None
Fescue, Tall	9,000	None	None	None	None	None
Orchard Grass	None	None	12,000	None	4/	None
Ryegrass, Annual	30,000	None	7,000	2,000	1/	1/
Ryegrass, Perennial	5,000	None	11,000	None	4/	None
Timothy	4,000	16,000	200	None	1/	None

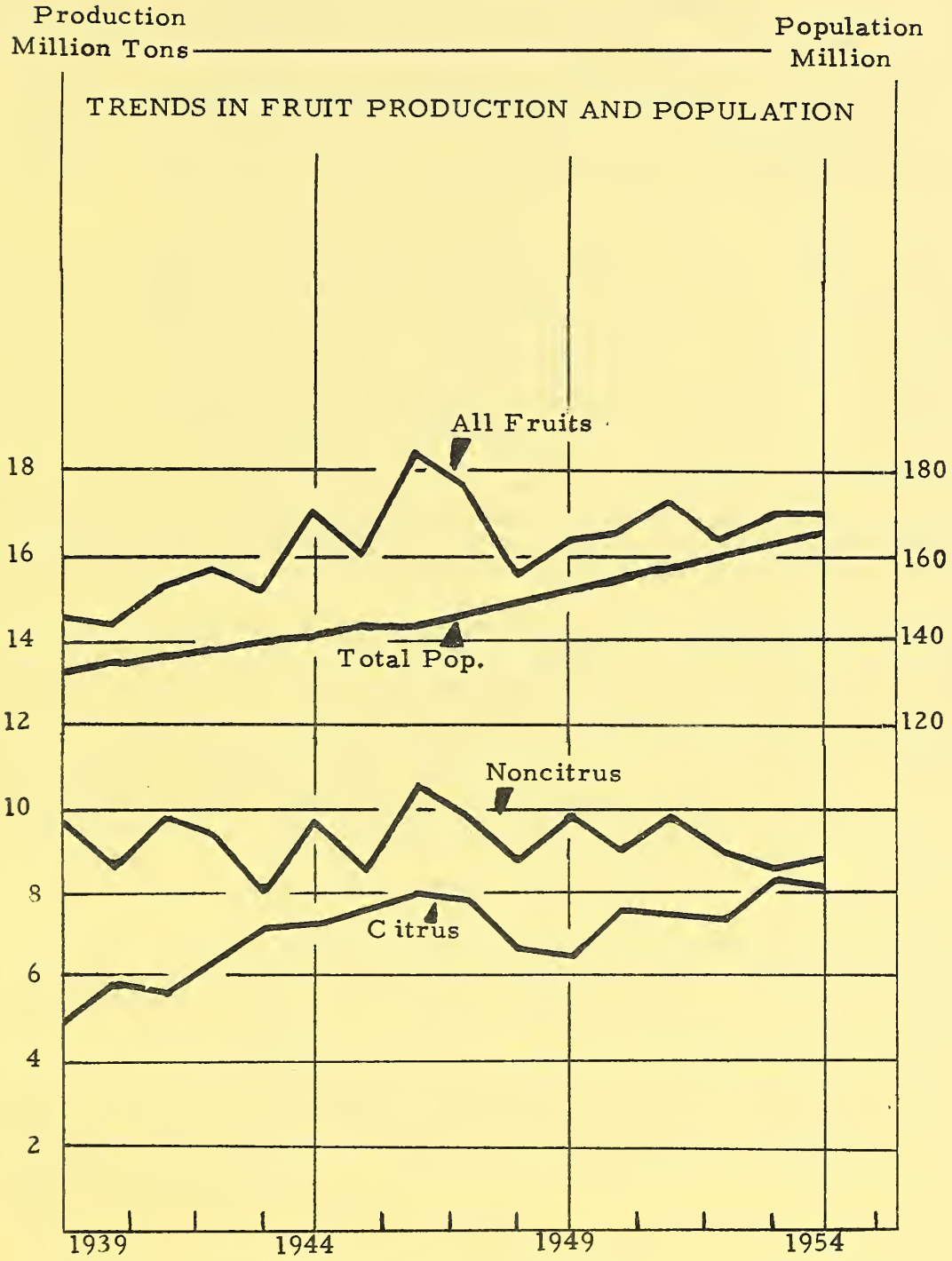
1/ No report.
2/ Trade report - no official statistics.
3/ No specific information; reported to have bought 2 million from France.
4/ No specific information reported to be considerable.

2. The decline in world seed prices is well illustrated by comparing the 1955 prices with those of a year ago in Denmark.

Danish Wholesale Seed Prices

Kind of Seed	August 1954	October 25, 1954	October 10 1955
	cents per pound	cents per pound	cents per pound
Orchard grass	28.7	36.1	13.8
Perennial ryegrass	23.3	24.3 early	9.8
		30.9 late	
Red clover, early	91.6	105.1	44.4
Red clover, late			
Annual ryegrass	23.7	26.7	9.86
Red Fescue	26.2	33.8	13.8
White clover	99.4	105.1	52.6

PRODUCTION CONSIDERATIONS IN THE 1956 FRUIT AND TREE NUT OUTLOOK



Prepared for the 33rd National Outlook Conference, Nov. 28 - Dec. 1, 1955, by the Fruit and Vegetable Statistics Branch, Agricultural Estimates Division, Agricultural Marketing Service, U. S. D. A.

PRODUCTION CONSIDERATIONS IN THE 1956 OUTLOOK FOR FRUITS AND TREE NUTS

The level of total fruit production in the United States has increased about 17 percent during the past 15 years, while population during this period has increased about 24 percent. This means that per capita production of fruits has been declining for several years despite higher consumer purchasing power.

The total production of citrus fruits has increased 70 percent since 1939, despite severe freeze damage in several producing areas during this period. This upward trend in citrus production is expected to continue for several years but at a slower rate of increase. Florida continues to expand in bearing capacity, both from new plantings and increasing size of trees. The trend in California oranges and grapefruit is moderately downward and for lemons, about level. Texas citrus trees of all kinds were nearly wiped out in February 1951. The level of production was reduced from about 30 million boxes to less than 1 million but has been reviving since the freeze, reaching 4 million boxes in 1954-55. Texas production should continue to increase for several years. Arizona citrus production probably will not change materially for at least a few years.

Fresh sales of citrus fruits increased steadily from about the turn of the century until the period from 1943 to 1946. Since 1946, total fresh sales of citrus have declined moderately and are now at about the same level as in 1939. Processing of citrus fruits, on the other hand, has continued to increase steadily and the level is now about four times that of 1939. Until about 10 years ago, canned single strength juice was the principal product, but in recent years frozen concentrated orange juice has become the most important citrus product. Frozen concentrated orange juice now accounts for more than a third of all oranges produced in the country and about two-thirds of all oranges processed.

The level of noncitrus fruit production is about the same as it was 15 years ago. Total noncitrus fruits probably will remain at approximately this level for the next few years. Lower levels since 1939 for apples, peaches, prunes, and figs have been offset by increases in pears, grapes, cherries, and cranberries. Apricots, plums, strawberries, and olives are at about the same level of production as 15 years ago. Fresh sales of noncitrus fruits have declined moderately since 1939 while total processing increased about the same amount. Increases in canning and freezing during

this period were about offset by a decline in dried fruits. The production of other processed products--principally vinegar, wine, and jelly--is at about the same level as in 1939.

Total tree-nut production (almonds, walnuts, filberts, and pecans) has increased about 40 percent during the past 15 years, with increases in each of the 4 major kinds. The trend should continue upward for almonds and walnuts for a few years but probably has leveled off for filberts and pecans.

Oranges: The trend in orange production has been upward for 50 years and will probably continue upward for several years but at a slower rate of increase. Production of oranges in the United States is now in greater volume than for any other fruit crop. More than half of the United States production is processed. The production of frozen concentrated orange juice is probably the outstanding development in the United States fruit industry in recent years. The packing of this product on a commercial scale started only about 10 years ago. However, it increased so rapidly that in the past two seasons more than a third of the United States orange crop was used for frozen concentrate. Nearly all of this product has been made in Florida.

Production in Florida for most kinds of oranges continues sharply upward. In California, the production trend has turned moderately downward for both navels and Valencias. California Valencias are essentially the only fresh oranges available during the summer and early fall. This has been a great advantage to California in marketing her Valencia crop. This advantage has been sharply reduced by the competition of frozen orange concentrate from Florida. The pressure of this competition will probably increase as Florida production increases. Many California citrus groves are giving way to the expanding cities and towns, especially in Southern California. Arizona orange production probably will not change materially in the next few years. The Texas production will be relatively small for a few years because of severe freeze damage in 1949 and 1951.

Grapefruit: The production of grapefruit in the United States increased rapidly from 1939 until 1949 when the upward trend was halted by a freeze in Texas. Another Texas freeze in 1951 killed most of the trees. Texas production is expected to increase in the future. The trend in Florida grapefruit will probably continue moderately upward for several years.

Lemons: The level of lemon production has not changed significantly during the past 15 years. A slight to moderate increase is possible in the next few years, since the increase in population should increase the demand for fresh lemons as well as the new processed products such as frozen lemonade concentrate.

Apples: Apples account for about a third of the noncitrus fruit total and provide almost half the fresh market supplies of domestic noncitrus fruit. The production trend for apples has been moderately downward since 1939, and appears to be leveling off at 15 to 20 percent below the production potential of 1939. Sales of nursery stock are reported to have been large during the past 2 years. The decline in apple production has been accounted for mostly by the removal of low yielding orchards and less desirable varieties. Despite the downtrend in production, processing has been increasing, particularly the canning of applesauce in the East.

The production of apples in New England has increased moderately since 1939, in contrast with moderate to sharp declines for all other important producing areas of the East. New York is down about a fifth and the Appalachian area (Pennsylvania, Maryland, Virginia, West Virginia) is down about a fourth. These areas have probably leveled off in production.

Michigan production has fluctuated between 5 and 12 million bushels since 1939 but production capacity has declined only slightly. This trend is expected to hold about level or increase moderately during the next few years. The total production level for the other Central States is down about a third with considerable variation among the States.

Washington State produced a record crop of 35½ million bushels in 1950. The following four crops were each less than 25 million bushels but the 1955 crop is estimated at 31 million. Production capacity in this State declined moderately between 1939 and 1943 but has been increasing since 1943 and is now about the same as in 1939. This slight upward trend is expected to continue during the next few years.

California apple production increased from 1939 to 1947 when a record crop of 11 million bushels was produced. The tend has leveled off moderately below the peak of 1947 and is expected to hold about steady for a few years. Each of the other Western States shows a decline since 1939 and a slight to moderate decline can be expected for the next few years.

Peaches: Peaches are exceeded in importance only by apples and grapes among noncitrus fruits. Fresh sales of peaches amount to about half of production and are second only to fresh apple sales in tonnage. Production increased sharply from 1939 until 1946 and has since declined to a level slightly below that of 1939. In the spring of 1955, a disastrous freeze in the Southern States practically wiped out the 1955 peach crop in those States and killed or damaged a great many peach trees. The production capacity in these States will be reduced for at least 2 or 3 years.

The potential level of production in California, where about one-half of the United States total peaches are grown, has increased moderately during the past 10 years. About two-thirds of the peaches produced in California have been clingstones used principally for canning. In order to hold production of clingstones within the limits of market requirements, California growers have put into operation a "green drop" program in recent years of large production. This program, which is operated as part of a marketing agreement, has resulted in the elimination of about 15 percent of production by stripping the green fruit from the trees early in the season.

The production level in the important Western States of Colorado, Washington, and Oregon increased between 1939 and 1946 but has not changed significantly during the past 10 years. No important changes are expected in these States during the coming few years except some possible expansion in the Grand Coulee Project of Washington.

Production trends in nearly all areas of the Northeastern and North Central States have been moderately downward except in New Jersey, which has shown a moderate increase.

The Southeastern and South Central States have been decreasing in production levels at rates from moderate to rapid. The 1955 freeze in these States will no doubt accelerate the downtrend--at least temporarily.

Pears: Pear production increased moderately between 1939 and 1947 and has since declined to about the same level as in 1939. The three Pacific Coast States moduce more than four-fifths of the Nation's pears and the proportion is increasing. Little change is expected during the next few years in overall pear production. The pear crops in California and Oregon have increased about 50 percent since 1939, while the Washington crop has not changed significantly. The increases in California and Oregon have been offset by decreases in nearly all Eastern and Central States. Fire blight has been a serious threat to pear trees for many years in nearly all areas of the country. The Western States have been able to keep the blight under control but damage in the Eastern and Central States has been severe. Some of the new treatments, especially antibiotics, show promise of controlling blight.

Grapes: The level of grape production in the United States increased about a fourth between 1939 and 1951. Since 1951, the trend apparently has turned downward. California continues to produce about nine-tenths of the United States total grapes. All three classes of California grapes (wine, table, and raisin) show about the same trend pattern since 1939--an increase between 1939 and 1951 and a moderate decline since 1951.

Grape production in Washington has increased steadily for more than 20 years and is now exceeded only by California and New York. The present level is more than four times as large as it was 15 years ago. This upward trend will probably continue for a few years. Production in the Great Lakes States varies widely from year to year from the effects of weather but the trend has been upward since 1939.

Cherries: The trend in production of sweet cherries was sharply upward until 1949 and has not changed significantly since. Little change is expected in the near future.

The production potential for sour cherries has increased steadily in the past 16 years and is now about 50 percent higher than in 1939. Actual production has fluctuated widely from year to year because of damage from freezes, frosts, and storms. The biggest crop to date was in 1951 when about 158,000 tons were harvested, including 8,700 tons which were not utilized because of low prices. In 1952, 1953, and 1954, production ranged from 108,000 to 132,000 tons but in 1955 again reached the 150,000-ton mark.

Production is expected to trend moderately upward for several years because of extensive recent plantings in Michigan and New York.

Plums: Plums are estimated only for California and Michigan. California produces more than nine-tenths of the total. The production level is moderately higher than in 1939. Very little change is expected in the near future.

Prunes: Production has declined about a fourth since 1939 but is expected to change very little in the next few years. Sharp drops occurred in Washington, Oregon, and California. The level in Idaho changed very little but Idaho accounts for only about 5 percent of the total production. Practically all of the California prunes are dried while most of the prunes in Washington, Oregon, and Idaho are sold fresh or canned.

Apricots: The level of apricot production has declined about a fourth since 1939. This decline is expected to continue for some time but at a slower rate. California produces about nine-tenths of the United States crop. From a fourth to a third of the crop is dried--all in California.

Cranberries: Cranberry production has trended upward since 1939. This trend probably will continue for a few years. Processing is the most important factor in the increase of cranberry production. Prior to 1934, processing was not important, but this utilization has since

expanded rapidly and now accounts for more than half of the production. The marketing season is extended throughout the year by the canned pack of cranberry products. Massachusetts has consistently produced more than half of the United States crop but the proportion of production in Massachusetts is decreasing as Wisconsin, Washington, and Oregon become more important producers. New Jersey holds at about the same level. Wisconsin has more than doubled in production since 1939 while Washington and Oregon crops are about 5 times as large as in 1939.

Fruits and Tree Nuts: Production and Per Capita Production, United States, 1939-1954

Year	Total Citrus 1/		Total Noncitrus 2/	
	Production	Per Capita 4/	Production	Per Capita 4/
	1,000 tons	Pounds	1,000 tons	Pounds
1939	4,776	72	9,698	146
1940	5,662	85	8,628	129
1941	5,521	83	9,680	145
1942	6,302	95	9,282	139
1943	7,089	109	7,971	122
1944	7,233	111	9,683	149
1945	7,466	114	8,489	130
1946	7,861	112	10,531	150
1947	7,792	108	9,838	136
1948	6,636	90	8,764	119
1949	6,479	87	9,761	130
1950	7,538	99	8,967	118
1951	7,368	96	9,816	128
1952	7,338	94	8,962	115
1953	8,220	104	8,636	109
1954	8,053	100	8,815	109

Year	Total Fruits		Total Tree Nuts 3/	
	Production	Per Capita 4/	Production	Per Capita 4/
	1,000 tons	Pounds	1,000 tons	Pounds
1939	14,474	218	144	2.2
1940	14,290	213	130	1.9
1941	15,201	227	147	2.2
1942	15,584	234	136	2.0
1943	15,060	231	158	2.4
1944	16,916	260	182	2.8
1945	15,955	244	177	2.7
1946	18,392	262	165	2.4
1947	17,630	244	170	2.4
1948	15,400	209	201	2.7
1949	16,240	217	204	2.7
1950	16,505	217	170	2.2
1951	17,184	224	204	2.7
1952	16,300	210	206	2.6
1953	16,856	213	209	2.6
1954	16,868	209	172	2.1

1/ Citrus fruit total includes oranges, tangerines, grapefruit, lemons, limes. The season for citrus fruits begins with the bloom of the year shown and ends with the completion of harvest the following year.

2/ Noncitrus fruit total includes apples (commercial)peaches, pears, grapes, cherries, plums, prunes, apricots, figs, olives, avocados, cranberries, strawberries.

3/ Tree nut total includes almonds, walnuts, filberts, pecans.

4/ Per capita production based on total population July 1 for years 1939-40, population eating out of civilian supplies, 1941-54. Estimates from data of Federal agencies with adjustments for under-enumeration.

Citrus Fruits and Tree Nuts: Production, by Kinds, United States, 1939-1954

Year	Oranges (including Tangerines)	Grapefruit	Lemons	Limes	Total citrus	Total fruits
			- 1,000 tons -			
1939	2,958	1,359	455	4	4,776	14,474
1940	3,335	1,669	655	3	5,662	14,290
1941	3,488	1,564	463	6	5,521	15,201
1942	3,728	1,979	588	7	6,302	15,584
1943	4,455	2,191	436	7	7,089	15,060
1944	4,693	2,034	496	10	7,233	16,916
1945	4,402	2,485	571	8	7,466	15,955
1946	4,979	2,330	545	7	7,861	18,392
1947	4,850	2,427	508	7	7,792	17,630
1948	4,440	1,793	395	8	6,636	15,400
1949	4,603	1,417	449	10	6,479	16,240
1950	5,175	1,821	531	11	7,538	16,505
1951	5,262	1,590	506	10	7,368	17,184
1952	5,323	1,506	497	12	7,338	16,300
1953	5,670	1,898	637	15	8,220	16,856
1954	5,833	1,652	553	15	8,053	16,868

Year	Almonds	Walnuts	Filberts	Pecans	4 Nuts
			- 1,000 tons -		
1939	29	62	4	49	144
1940	15	51	3	61	130
1941	10	70	6	61	147
1942	32	61	4	39	136
1943	20	64	7	67	158
1944	32	72	7	71	182
1945	32	71	5	69	177
1946	47	72	8	38	165
1947	36	65	9	60	170
1948	36	71	6	88	201
1949	43	88	11	62	204
1950	38	64	7	61	170
1951	43	77	7	77	204
1952	36	84	12	74	206
1953	39	59	5	106	209
1954	43	75	9	45	172

Noncitrus Fruits: Production by Kinds, United States, 1939-54

Year	Apples (Com'l)	Peaches	Pears	Grapes	Cherries	Plums	Prunes
			- 1,000 tons -				
1939	3,342	1,541	721	2,449	184	77	673
1940	2,674	1,388	730	2,466	173	74	543
1941	2,933	1,809	719	2,725	162	77	583
1942	3,041	1,601	746	2,396	197	76	542
1943	2,095	1,026	593	2,965	116	78	625
1944	2,910	1,874	766	2,696	196	96	507
1945	1,600	1,902	799	2,767	148	73	711
1946	2,854	1,988	823	3,137	228	106	688
1947	2,709	1,834	837	3,020	171	79	594
1948	2,144	1,455	614	3,061	213	72	544
1949	3,216	1,660	835	2,623	245	99	536
1950	2,988	1,215	719	2,688	239	84	418
1951	2,656	1,527	736	3,390	230	102	538
1952	2,220	1,501	758	3,164	218	61	423
1953	2,239	1,547	715	2,700	224	92	455
1954	2,628	1,472	744	2,569	206	79	515

Year	Apricots	Figs	Olives	Avocados	Cranberries	Straw-berries (Com'l)	Total Noncitrus
			- 1,000 tons -				
1939	332	88	23	10	35	223	9,698
1940	127	112	69	16	29	227	8,628
1941	214	121	55	20	36	226	9,680
1942	228	103	57	18	41	236	9,282
1943	104	134	57	26	34	118	7,971
1944	352	125	42	17	19	83	9,683
1945	192	113	30	27	33	94	8,489
1946	339	129	48	20	43	128	10,531
1947	201	131	40	21	40	161	9,838
1948	246	103	58	17	48	189	8,764
1949	197	94	35	21	42	158	9,761
1950	215	85	42	28	49	197	8,967
1951	183	103	64	34	46	207	9,816
1952	177	99	57	32	40	212	8,962
1953	243	83	28	32	60	218	8,636
1954	155	89	52	50	51	205	8,815

Fruits: Production and Utilization of Sales, Citrus and Noncitrus, United States, 1939-1954

Year	Citrus			
	Production 1,000 tons	Total Sales 1,000 tons	Fresh Sales 1,000 tons	Processed 1,000 tons
1939	4,776	4,690	3,609	1,081
1940	5,662	5,566	4,053	1,513
1941	5,521	5,462	4,137	1,325
1942	6,302	6,245	4,385	1,860
1943	7,089	7,021	4,997	2,024
1944	7,233	7,128	4,929	2,199
1945	7,466	7,399	4,610	2,789
1946	7,861	7,553	4,956	2,597
1947	7,792	7,413	4,297	3,116
1948	6,636	6,558	3,796	2,762
1949	6,479	6,399	3,333	3,066
1950	7,538	7,457	3,769	3,688
1951	7,368	7,160	3,820	3,340
1952	7,338	7,267	3,874	3,393
1953	8,220	8,078	3,745	4,333
1954	8,053	7,970	3,849	4,121

Year	Noncitrus						
	Production	Total Sales	Fresh Sales	Canned	Dried	Frozen	Other Processing
	1,000 tons	1,000 tons					
				- 1,000 tons -			
1939	9,698	8,791	4,295	945	2,255	24	1,272
1940	8,628	8,014	4,080	874	1,572	31	1,457
1941	9,680	9,050	4,371	1,182	1,783	37	1,677
1942	9,282	8,568	4,113	1,192	2,024	28	1,211
1943	7,971	7,691	2,967	854	2,576	88	1,206
1944	9,683	9,149	4,111	1,176	2,264	163	1,435
1945	8,489	8,102	3,500	983	1,994	193	1,432
1946	10,531	10,146	4,226	1,623	1,867	199	2,231
1947	9,838	9,340	4,248	1,370	2,168	115	1,439
1948	8,764	8,401	3,488	1,317	1,652	152	1,792
1949	9,761	8,918	4,080	1,428	1,830	139	1,441
1950	8,967	8,565	3,581	1,515	1,366	206	1,897
1951	9,816	9,233	3,614	1,645	1,706	174	2,094
1952	8,962	8,641	3,627	1,458	1,768	181	1,607
1953	8,636	8,340	3,478	1,583	1,608	219	1,452
1954	8,815	8,514	3,493	1,691	1,403	235	1,692

SEASON-AVERAGE PRICES, CLEAN-SEED BASIS, RECEIVED BY GROWERS 1940-55, DOLLARS PER 100 POUNDS

Kind of Seed	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	Oct. 15 1/ 1955
Alfalfa	14.60	20.10	25.70	33.20	33.90	34.20	36.50	24.90	41.60	37.50	36.80	45.20	32.70	22.90	32.90	20.80
Red Clover	10.00	15.20	20.00	29.90	31.20	31.00	36.70	46.70	43.10	40.40	30.50	32.10	31.30	25.60	44.60	29.30
Alsike Clover	10.50	14.20	19.40	26.90	28.50	28.20	31.50	31.90	27.80	28.80	33.70	35.80	26.90	16.30	26.40	20.40
Sweetclover	3.94	5.73	6.60	9.49	10.30	10.00	10.50	10.60	13.70	14.70	11.70	9.70	9.24	9.21	11.10	9.50
White Clover	43.00	51.50	45.70	48.90	59.10	75.50	62.80	42.10	65.50	78.20	80.10	54.90	48.30	45.30	69.10	55.90
Ladino Clover	44.60	57.80	78.10	108.00	172.00	142.00	128.00	161.00	167.00	129.00	119.00	108.00	91.50	33.20	51.70	60.00
Lespedeza	4.44	5.77	6.38	9.59	6.90	8.68	7.84	11.60	8.75	6.52	8.44	11.70	17.90	18.10	19.10	13.90
Timothy	3.31	4.56	4.45	5.27	5.99	5.48	6.34	4.55	9.98	18.90	10.20	7.32	13.60	12.40	17.30	8.24
Orchardgrass	12.30	19.20	20.30	24.50	24.50	20.80	11.10	9.77	15.30	18.20	17.80	15.60	16.60	13.40	26.20	15.60
Redtop	7.35	7.00	6.40	12.70	15.30	11.00	16.80	13.20	41.30	42.00	34.30	23.30	37.70	51.20	56.40	36.20
Kentucky Bluegrass 2/	5.10	6.00	5.50	9.10	12.10	15.10	24.70	11.50	11.80	9.20	11.30	9.31	12.50	15.50	14.10	9.50
Smooth Bromegrass	—	—	7.67	12.10	12.50	11.30	16.90	10.90	20.30	26.70	17.60	13.60	22.00	11.90	11.00	15.40
Crested Wheatgrass	9.45	14.25	6.17	9.70	12.60	8.03	13.30	15.90	27.20	24.40	15.60	25.60	34.00	14.90	16.90	20.10
Sudangrass	2.18	1.30	2.98	7.40	4.91	5.26	7.48	6.27	5.68	5.37	7.34	7.06	10.50	5.20	8.88	4.85
Chewings Fescue	25.50	26.00	33.00	44.00	55.50	49.50	48.50	29.50	36.50	33.90	49.70	66.50	47.00	43.00	25.00	17.00
Red Fescue	52.00	45.00	45.00	49.00	61.00	51.00	49.00	31.50	40.50	39.20	51.80	69.30	48.30	41.30	24.90	20.00
Tall Fescue	12.75	20.00	25.00	33.00	38.50	41.50	37.50	29.50	41.20	43.50	40.20	50.90	25.40	12.50	15.50	8.60
Bentgrass	40.00	43.50	45.00	57.00	55.00	69.00	81.50	59.50	58.70	63.70	67.50	81.40	52.80	61.10	55.00	50.00
Hairy Vetch	7.30	7.29	9.87	11.70	11.10	11.10	14.10	16.50	18.20	16.10	15.10	14.90	13.50	11.50	11.10	12.50
Common Vetch	3.04	3.80	5.28	6.13	6.05	5.80	6.00	6.10	8.02	8.81	6.40	6.45	5.51	4.17	4.80	5.75
Purple Vetch	3.11	4.32	5.45	5.96	7.29	7.39	7.23	7.68	8.97	8.50	6.01	8.00	6.20	5.20	4.50	9.00
Common Ryegrass	3.10	4.30	5.00	7.90	7.00	7.50	7.50	5.95	7.80	9.70	7.50	9.00	6.70	8.90	7.00	4.50
Perennial Ryegrass	8.00	8.85	10.50	13.50	12.90	14.00	14.00	9.40	10.70	13.30	12.50	13.60	9.40	11.60	13.50	7.50
Austrian Winter Peas	2.95	3.21	4.90	4.90	4.81	3.51	3.44	4.83	6.01	4.36	4.47	3.61	3.11	2.65	2.50	3.00
Lupine	—	—	—	7.60	6.00	5.00	4.85	3.95	4.81	4.53	4.52	4.54	3.89	3.31	4.10	4.00
Crimson Clover	9.49	9.58	10.80	10.50	12.80	15.40	16.80	18.30	23.00	20.70	32.70	27.80	21.10	15.80	19.60	26.30

1/ Preliminary or estimated.

2/ Kentucky Bluegrass prices are for cured seed.

Source: U.S.D.A.- CROP REPORTING BOARD

Prepared as Background Material for 33rd Annual Outlook Conference, Washington, D. C., November 1955

Agriculture-Washington

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U. S. DEPT. OF AGRICULTURE
Federal Extension Service
Washington 25, D. C.

ECONOMISTS' DINNER MEETING

On Tuesday evening, November 29, there will be an informal dinner for the State Extension economists and Federal Extension economists. It will take place at 5:45 p.m. in room 6953.

Following the dinner, Carroll Bottum, Indiana, will serve as chairman at a short session on the additional data needed from the Crop Reporting Service to make Outlook more accurate and effective. It will probably be over by 8:00 p.m.

Here are the directions:

Get your supper in the regular cafeteria line in the 5th wing cafeteria.

After paying cashier, keep to your right around the cash register, go behind the food counters and into the kitchens; turn right through the kitchen and the 6th wing cafeteria, into the corridor to room 6953, the executive dining room, which is to your left.

AEP-199 (11-55)

U. S. Dept. of Agriculture
Federal Extension Service
Agricultural Programs
Washington 25, D. C.

TRENDS TOWARD PRODUCTION OF IMPROVED VARIETIES OF GRASS AND LEGUME SEED

Forage grasses and legumes as hay, pasture and silage comprise half of the nation's food supply and the proportion is increasing. From about 14 million in 1940, alfalfa acreage has expanded to nearly 23 million. Many factors contributed to this increased planting but release of improved varieties, research on alfalfa seed production, and a sound program to provide ample supplies of foundation stock seed helped greatly to increase plantings on farms throughout the country.

After an improved variety is tested and released, two functions must be performed before it is of any value to producers: first, an adequate and dependable seed supply must be made available and second, the producer must be made aware of the advantages he can receive by replacing the variety being grown on his farm with the improved variety.

To accomplish the first objective, the National Foundation Seed Project was organized in 1949. The Foundation is guided by a 16-man advisory committee made up of representatives from the sponsoring agencies. Its membership is composed of 8 representatives from the agricultural experiment stations, 4 from the USDA, and 2 each from the International Crop Improvement Association and the American Seed Trade Association. At the present time there are 5 varieties in the project including: Atlantic, Buffalo, Narragansett, Vernal, and Ranger alfalfa; Dollard, Kenland and Pennscott red clover; Tift sudangrass; Climax lespedeza; and the 5-blend lines of Midland red clover. At the time the project began in 1949, the total certified seed produced from these varieties was 1,477,548 pounds as compared to 46,310,000 pounds in 1954.

The following table shows the annual production of certified seed of the small-seeded grasses and legumes 1942-1950, produced under the supervision of 43 State Crop Improvement Associations.

/more/

Prepared for the 33d Agricultural Outlook Conference
November 28 - December 1, 1955.

Table - Annual Production of Certified Seed of the Small-Seeded Grasses and Legumes-1942-1950

Year	Legumes (pounds)	Grasses (pounds)
1942*	3,359,729	7,809,454
1943*	5,174,161	5,647,434
1944*	3,718,570	8,057,929
1945*	8,470,219	9,176,720
1946*	7,840,605	9,686,492
1947*	8,691,995	13,606,937
1948*	8,801,539	13,336,378
1949*	12,331,737	15,224,703
1950	22,395,313	29,903,827

* Includes all classes of seed - Foundation, Registered, Certified.

Informing producers of the new and improved varieties of grasses and legumes, and in demonstrating their superiority over the varieties currently used is primarily the job of the 5,840 county and assistant county agricultural extension agents with the assistance of the Soil Conservation Service, Agricultural Conservation Program Service, Agricultural Research Service, Agricultural Marketing Service, and the Forest Service.

Though our economy is burdened now by surpluses of certain commodities, forage feeds are not now, nor are they likely to be, in surplus. Moreover, in recent years there have been acute shortages of forage. Trends toward production of improved varieties of grasses and legumes has shown a consistent increase and can do much in the future toward better soil conservation and more efficient food production.

UNITED STATES DEPARTMENT OF AGRICULTURE
U. S. FEDERAL EXTENSION SERVICE
Washington 25, D. C.

1956 OUTLOOK CONFERENCE MATERIALS FOR FRUIT, VEGETABLE, AND POTATO WORK SESSIONS - 9:30-12:30, DECEMBER 1, 1955

This packet of materials was prepared by different agencies of the U. S. Department of Agriculture in charge of various lines of work dealing with marketing and distribution research, service and action programs.

It is the hope that this material will prove valuable to you as "ready reference" and will supplement and compliment other information you may use in carrying out your outlook program during the coming year.

You will note that information in this packet is on different colors of paper in an attempt to make it more readily available to you. Information dealing with the commodity group is on white paper; fruits on yellow; vegetables on green; potatoes on goldenrod; and information pertaining only to dry beans on pink paper.

In addition to the information contained in this packet, the following reference materials should prove helpful to you in your outlook work in this field.

General

1. The Demand and Price Situation - This publication is issued about the 24th of each month, with an annual Outlook issue each fall and a reappraisal issue each spring. It reviews the factors that affect the domestic and foreign demand for farm products including output, employment, income and related factors, and commodity prices. This is followed by a brief review of farm income and discussion of general trends in demand, supply, and prices of major farm products. A table, Economic Factors Affecting Agriculture, shows data on above information and related factors.

2. The Marketing and Transportation Situation - Contains statistical tables showing the U. S. average retail cost of a market basket of farm foods, the payment received by farmers for these products in dollars and cents and as a percentage of the retail cost, and the spread between the retail cost and farm value or payment to the farmer. Similar data is given for six groups of products and 45 individual food products, and also for a group of cotton clothing articles and housefurnishings and the principal tobacco products. Special articles concerning the marketing and transportation of farm products are included in each issue. Emphasis is placed on reporting results of reseach conducted in the Agricultural Marketing Service. Each fall the outlook for marketing and transportation of farm products is analyzed. Issues in 1956 will be released the latter part of January, April, July and October.

3. The National Food Situation - Contains statistical tables showing per capita consumption of major foods, nutrients available for civilian consumption, production of major food commodities, and retail food prices and total consumer price index numbers. Reviews of supply, production, marketing, retail prices, and consumption of major foods are included. 1956 issues of The National Food Situation are scheduled for release on February 10, May 2, August 2, and November 7.

4. Consumption of Foods in the United States, 1909-52 - Agricultural Handbook No. 62, September 1953

5. Cold Storage Report - Issued the 15th of each month, this report gives national and regional storage holdings of some major commodities stored in public, private, and semi-private refrigerated warehouses. End-of-month storage stocks include fruits and vegetables (fresh, frozen, dried, and canned), juices, nuts and nutmeats, dairy products, eggs (shell, frozen, and dried), poultry, meats, and meat products. In addition to current storage holdings, comparative data are given for each commodity - previous month, previous year, and immediate 5-year average. State holdings of apples and pears are also reported during the active storage season. Also included are tables showing the current utilization of cooler and freezer space in public general warehouses, by States and selected key cities, as well as regional occupancy data for private and semi-private warehouses combined, meat-packing plants, and apple storage facilities.

6. Marketing Activities - A monthly publication designed to keep trade publications, trade organizations, marketing officials, marketing specialists, industry, and the general public informed about current services and regulations, marketing research, and related matters. It carries articles dealing with various phases of marketing - research, standardization, inspection, grading, regulatory activities, market reporting, statistics, and marketing-agreement programs. It is issued about the 29th of each month.

7. Commodity Situation Reports - The Fruit and the Vegetable commodity situation reports give a fairly complete picture of the supply, demand, price, and outlook for each of the more important farm products for which adequate information is available. This information is provided as an aid in planning production and marketing. Tables and charts present current figures on acreage, yield, production, market movement, stocks, consumption, and prices, with comparisons with other significant periods. From time to time the results of special studies relating to the respective commodities are included. Copies of these reports (Outlook issue) are available for you to take with you from this session.

8. Canned Foods' Report - U. S. Department of Commerce, Bureau of Census

Fruits

1. "Factors Affecting Prices of Apples" - B. H. Pubols, Agricultural Economics Research, Vol. 6, No. 3, July 1954 - AMS, USDA

2. Crop Production - U. S. crop summary as of November 1, 1955 including Fruits, Nuts and Potatoes - November 10, 1955, AMS, USDA

3. Apples - Production by Varieties - December 21, 1955, AMS, USDA

Vegetables

1. The Demand and Price Structure for Selected Vegetables - Technical Bulletin No. 1105 - December 1954, USDA

2. Commercial Vegetable for Fresh Market - Annual Summary 1955 - Issued December 1955, AMS, USDA, Washington, D. C.

Potatoes

1. Crop Production - U. S. Summary as of November 1, 1955, including Potatoes and Sweet Potatoes - AMS, USDA

2. Potato Stocks - January 19, 1956 (3:00 p.m.)

3. "Highlights of Potato Marketing" by A. C. Cook, Agricultural Information Bulletin No. 114, USDA, October 1953.

4. "Price Supports and the Potato Industry" - Roger W. Gray, et al, Station Bulletin 424, Agricultural Experiment Station, University of Minnesota, January 1954.

CONTRIBUTION TO THE OUTLOOK FOR FRUITS, VEGETABLES AND POTATOES BY RESEARCH ON UTILIZATION AND PRODUCT DEVELOPMENT

Objectives of Utilization Research:

To increase consumption of fruit, vegetable and potato products through the development of new or improved food products; by improvement of quality and convenience of preparation for the consumer; and through decreased costs of processing and handling.

Some New Developments of Research That May Affect the Production or Distribution Outlook

Developments in the Department's research program on the utilization of fruits, vegetables and potatoes which may be of direct interest to Outlook include:

Time-temperature tolerance of frozen fruits and vegetables
Fruit and vegetable juice concentrates and powders
Dehydrofrozen fruits and vegetables
Dehydrated mashed potatoes
Potato chips and frozen French-fried potatoes
Pre-Peeled Potatoes
Cucumber pickling
Red grapefruit juice

The time-temperature-tolerance work concerns quality deterioration of frozen fruits and vegetables that takes place from the time of packing through the successive stages of warehousing, transportation, distribution and consumer storage. Its objective is two-fold: 1) to obtain the necessary facts on which a sound schedule for the distribution of frozen foods can be based without undue sacrifice of quality, and 2) to develop objective tests which reflect the time-temperature history of a given product. Results obtained thus far indicate that refrigeration facilities used in transporting frozen foods and in storage cabinets in many instances may need either modernization or improvement in operation in order that the quality of frozen fruits and vegetables will be properly safeguarded and consumer complaint avoided. Retention of fresh qualities in frozen foods through proper handling will doubtless increase consumption of these foods.

Fruit and vegetable juice concentrates, juice powders and dehydrofrozen products offer cost advantages in packaging, transportation and storage through reduction of weight and volume.

Prepared for the Fruits, Vegetables and Potatoes Commodity Sessions of the 33rd Annual Agricultural Outlook Conference, Nov. 28 - Dec. 1, 1955; by the Western, Eastern and Southern Utilization Branches, ARS.

AEP 181 (11 - 55)

Continued improvement of frozen orange juice concentrate to increase cloud stability (prevention of settling of suspended solids) and to improve flavor is expected to further increase the popularity of this product.

Present trends in food processing favor convenience factors in home and restaurant or institutional preparation. The above-mentioned products fit into this pattern. Dehydrated mashed potatoes, potato chips, frozen French fries and patties, and pre-peeled potatoes are other "convenience" products. These are gaining rapidly in acceptance and their rate of consumption is expected to increase. Utilization research has made significant contributions to methods of processing, quality and storage stability of such items.

Information obtained from investigations on causes of softening and spoilage of commercially brined cucumbers promises to effect great savings to the pickle industry.

Development of processing methods to improve color and acceptability of juice from pink or red-meated grapefruit should increase utilization of this type of fruit, plantings and production of which are expanding rapidly.

FRUITS

Time-Temperature Tolerance of Frozen Fruits

Investigation of quality deterioration of frozen fruits from the time of packing in retail containers through warehousing, transportation and distribution has essentially been completed. Frozen strawberries, raspberries, peaches and red sour-pitted cherries have been subjected to a broad range of time-temperature conditions such as are encountered in the channels of trade. Further work is being done on institutional size packs. The information obtained should serve as an important guide for the correction of malpractices, where such exist, in warehousing, transportation, distribution and consumer storage and where such result in economic losses and customer complaint. Resulting improvements in quality should increase consumption of frozen fruit items.

Fruit Juice Concentrates and Powders and Fruit Essences

Juice concentrates have been prepared from apple, grape, strawberry, prune, cherry, blackberry and other fruits. Frozen orange, pineapple, grape and lemon juice concentrates are already available commercially. Strawberry juice concentrate (used for remanufacturing into jellies) is in commercial production in at least one plant. Apple juice concentrate has also been produced successfully. Other fruit juice concentrates may also be in production in minor or experimental quantities. Fruit juice concentrates possess significant advantages over single-strength products in container and transportation costs. As developed by scientists engaged in utilization research, they are full-flavored due to essence recovery procedures, are convenient for use, have year-round marketability, and may be expected to increase fruit utilization in the jelly, beverage and flavoring extract industries. A number of fruit juice concentrates will probably become available to the consumer in increasing quantities within the next few years.

A variety of fruit juice powders, including orange, apple, grape, lemon, grapefruit and pineapple, have been prepared. Orange and grapefruit juice powders are in commercial production for institutional use. Investigations are in progress on fruit powders to refine or improve methods and equipment for preparation, for "locking-in" the volatile flavoring components, and in some instances, of improving high temperature storage stability. Fruit juice powders are more costly to produce than the corresponding concentrates, but they have a distinct advantage in requiring no refrigeration and in being stable under high summer temperature conditions. The products are convenient for use not only as beverages but also for other products such as flavorings for baked goods and ingredients of confections ready-mixed desserts, ice-creams, sherbets and other foods. Economy in shipping costs should materially increase the potentiality of export markets for these fruit products.

Recovery of fruit essences in connection with fruit preserving, canning, and juice manufacture will likely increase in response to demands for full-flavored food products.

FRUITS (Cont'd)

Dehydrofreezing

Dehydrofreezing is a new process which consists of the partial drying of a fruit or vegetable followed by freezing. It combines the advantages of two commonly used food preservation methods - dehydration and freezing - and at the same time eliminates certain disadvantages of each. Laboratory and pilot plant scale investigations have resulted in the initiation of commercial production of dehydrofrozen apple slices (for pie baking) and commercial trials of dehydrofrozen apricots (for preserve manufacture and pie baking). Adoption of dehydrofreezing, should enable substantial savings in transportation charges and in container and warehousing costs since the weight and volume of dehydrofrozen commodities are reduced by one-half.

Stabilization of frozen orange juice concentrate

One problem influencing consumer acceptance of some frozen orange juice products adversely is the rapid settling of the suspended solids (cloud instability) when reconstituted. Means of stabilizing the concentrate through special heat treatment and other process modifications during manufacture, and the influence of seasonal and fruit varietal factors on juice quality are under investigation. Application of the results of this work is anticipated to be of considerable significance in further increasing the consumption of frozen orange juice concentrate.

Red grapefruit juice

Work is in progress to develop an improved and color stabilized single-strength juice from pink and red-meated grapefruit. Pilot scale trial packs employing newly devised methods of processing involving pulp fortification are being prepared for industrial evaluation. This product appears promising as a means of increasing utilization of colored grapefruit in connection with expanding production. Possibilities of producing juice concentrate and powder from this type of fruit are also being investigated.

Dehydrofreezing

The new process of dehydrofreezing also has been tested for vegetables and appears commercially applicable to pimientos, carrots, peas, okra, and possibly also to green beans, lima beans, and celery. Dehydrofrozen pimientos have been processed commercially for several years and used to advantage in the manufacture of pimiento cheese. Dehydrofrozen peas have been produced in small lots for testing by the Armed Forces, for soup manufacture, and institutional use. Experimental lots of carrots are being prepared this year on a commercial scale for use in soup manufacture.

Adoption of dehydrofreezing, especially by Western processors serving Midwestern or Eastern consumers, will enable substantial savings in containers, transportation charges, and warehousing cost since the weight and volume of dehydrofrozen commodities are reduced by one-half or more. These savings more than offset the increased cost of processing over freezing alone. Outlets for dehydrofrozen vegetables will likely be limited to remanufacture, such as for canned soups, and to institutional use.

Development of new, continuous equipment, especially suited for the dehydration step in dehydrofreezing, promises to have wide application not only for the dehydrofreezing process alone but also for increased efficiency in the first stages of complete dehydration of some vegetables where trays are now commonly used.

Tomato Juice Concentrate and Powder

Tomato juice contains nearly 20 pounds of water for every pound of food substance. This imposes a severe cost handicap in the marketing of tomato juice solids. Tomato juice concentrate has been successfully developed on a pilot plant scale and commercially prepared products are being test marketed. More general commercial availability of tomato juice concentrate may be expected.

Production of tomato juice powder on a pilot commercial scale has been undertaken this year in one plant using a continuous vaccum drying procedure recently developed by utilization research scientists. Such a product retains the original red color of tomatoes, is very stable on storage and is readily reconstituted to a single-strength juice of excellent flavor. The newly developed tomato juice powder is expected to have a variety of military and civilian uses such as for consumption as juice; as an ingredient of dehydrated soup mixes, sauces, aspics and similar products; and as a substitute for tomato paste particularly under conditions of high temperature storage

Time-Temperature Tolerance of Frozen Vegetables

Investigation of quality deterioration of frozen vegetables from the time of packing in retail containers through warehousing, transportation and distribution is in progress. Work on peas and green beans is nearing completion while that on spinach and cauliflower is in the initial stages. These commodities have been or are being subjectedto a broad range of time-temperature

conditions such as are encountered in the channels of trade. The information obtained should serve as an important guide for the adoption of improved practices in warehousing, transportation, distribution, and consumer storage which now result in economic losses and customer complaint. Resulting improvements in quality should increase consumption of frozen vegetable items.

Cucumber Pickling

Softening and "bloater" (hollow stock) spoilage in commercially brined cucumbers cause serious losses to the pickle industry, estimated as high as $4 million annually. Investigations of these problems have resulted in the development of preventive methods in processing. Commercial-scale trials of these methods have proven very promising and spoilage losses in pickle manufacture are expected to be greatly reduced.

POTATOES

New potato products such as dried mashed potatoes, frozen French-fries and patties, which are easy to serve, uniform in quality and have long shelf life, and which are available to the consumer at all times fit in excellently with the growing trend in processing toward providing greater service to the consumer in food preparation. Such products should increase potato utilization or at least halt the long-time declining rate of per-capita consumption of potatoes. Increased processing of potatoes into stable products should also tend toward stabilizing prices which now fluctuate wildly in response to seasonal variationsin production.

Dried Mashed Potatoes (Potato Granules)

Improvements in processing techniques, development of new drying equipment, establishment of better quality control methods and packaging conditions essential to product stability have given substantial impetus to the commercial production of potato granules. Products of good quality are now available on the retail market, and consumer demand appears to be increasing rapidly.

Potato flakes is a new dried mashed potato product in course of development. It employs a process different from that used for making potato granules and has different packaging characteristics. This product has not yet been tried on a commercial scale but is promising and has aroused considerable interest. The housewife needs only to mix hot water or milk with a measured quantity of either granules or flakes, whip for a few seconds and mashed potatoes are ready for serving.

Potato Chips and Frozen French-Fried Potatoes

Production of these items has shown a steady increase in recent years. Frozen French fries - a comparatively recent development - are considered to have a great potential for future expansion. Existing plants are rapidly increasing their producing capacity, and construction of new plants is contemplated.

One contribution of research, which may affect the outlook for these products in the next few years, concerns investigation of factors influencing the quality of raw potatoes that are used. Results of research now in progress are expected to aid in defining best cultural conditions, varieties and handling and conditioning practices for raw potatoes to insure high and uniform quality of finished product. Results of such research may also be expected to aid in the location of plant sites in vicinities where the most suitable raw materials are produced thus effecting economies in transportation of raw material and other factors.

Pre-Peeled Potatoes

Pre-peeled potatoes appear to be coming into more widespread use by restaurants, drive-ins, hotels, amusement parks, hospitals and other institutions. Eventually, a sizable retail market may also be developed as certain technological problems associated with packaging and shelf life are solved. Information obtained through investigations of methods of peeling, handling, and refrigeration have been of significant help to processors engaged in pre-peeling. This knowledge is expected to be an important factor in assisting the industry in its trend toward expansion.

Sweet Potato Processing

Processing has recently assumed an increasingly important role in providing outlets for a significant part of the sweet potato crop not desired for the fresh trade. Canned sweet potatoes are rapidly gaining in popularity as an attractive, nutritious, easy-to-prepare food demanded by the modern housewife and institutional meal planner. The canned product not only gives the sweet potato grower a dependable market for a portion of his crop at the time of harvest but also minimizes the normally heavy losses encountered in the storage, handling and marketing of the fresh product. Investigations on varietal suitability, conditions of storage for the raw material, and processing technology in relation to quality and acceptability of sweet potato products have made important contributions to the industry. The trend toward increased processing of sweet potatoes is expected to continue.

). Agricultural Marketing Law -

Federal Marketing Agreement and Order Programs for Fruits and Vegetables

Federal marketing agreement and order programs regulate the handling of agricultural commodities in interstate or foreign commerce. They may also cover intrastate movement which burdnes, obstructs, or affects interstate commerce. These programs are based upon the Agricultural Marketing Agreement Act of 1937, as amended. They reach back legislatively beyond 1937, however, to the Agricultural Adjustment Act of 1933, and their legislative genesis can be traced farther back to the post World War I, and even prewar, cooperative efforts of farmers to improve the quality of the commodities marketed and to balance shipments to the market demand. In many respects the marketing agreement and order programs are extensions of the cooperative marketing principle.

Objectives

Basically, the objective of a marketing agreement and order program is to increase returns to producers. The Congress provided, however, that the interests of consumers were to be protected also. The original provisions of the Act stated that it was the declared policy of Congress to: (1) establish and maintain such orderly marketing conditions of agricultural commodities as will return parity prices to farmers, and (2) protect the interest of consumers by approaching the parity level gradually and by taking no action for the purpose of maintaining prices above parity. Subsequently, this policy was enlarged to authorize, for specified commodities, the establishment of: (1) such minimum standards of quality and maturity and such grading and inspection requirements "as will be in the public interest" and (2) such orderly marketing conditions as will provide, "in the interests of producers and consumers," an orderly flow of supplies to market during the normal marketing season "to avoid unreasonable fluctuations in supplies and prices "

Differences in Marketing Agreements and Orders

Marketing agreements and orders generally are spoken of synonymously since there have been no recent agreements entered into without a supplementary order. When both a marketing agreement and an order are used, the effective terms of the two instruments are identical. There are basic differences, however. A marketing agreement is what the name implies -- an agreement between the Secretary of Agriculture and the handlers of a particular agricultural commodity. Such an agreement is voluntary and compliance with its terms is mandatory only upon the handlers who signs it. Hence, a marketing agreement alone seldom would be effective in achieving the purposes of the Act since there are always some handlers who fail to sign.

Prepared in the Fruit and Vegetable Division, Agricultural Marketing Service, U.S.D.A., for the 33rd National Outlook Conference, Fruit and Vegetable Work Session, Washington, D. C., 1955.

A marketing order may be issued only for commodities specified in the Act, whereas a marketing agreement may cover any agricultural commodity. Marketing orders may be issued for any fresh fruit or vegetable, including filberts, almonds, pecans, and walnuts, except apples grown outside the States of Washington, Oregon, Idaho. Of the commodities for canning and freezing, only olives, grapefruit, and asparagus may be covered by a marketing order. The provisions which may be included in a marketing order are limited by the provisions of the Act but a marketing agreement may enbody any provision so long as it will tend to accomplish the declared policy of the Act.

A marketing order may be issued for a commodity only if the Secretary of Agriculture determines that at least two-thirds of the producers in an area, by number or volume of production approve such action, Usually a referendum among producers in the area is conducted to aid the Secretary in making this determination. In addition, handlers of at least 50 percent of the volume of the commodity concerned (80 percent in the case of California citrus fruits) must have signed a marketing agreement before the marketing orcer is issued, or the Secretary of Agriculture must find that the refusal or failure of the requisite number of handlers to sign the agreement "tends to prevent the effectuation of the declared policy" of the Act and that the issuance of the order is the "only practical means of advancing the interets of producers" pursuant to sucn policy. In the case of grapefruit for canning, however, an order cannot be issued without a marketing agreement.

Nature and Scope

The Agricultural Marketing Agreement Act does not impose any contrcl over the marketing of any agricultural commodity; it merely provides the authority under which regulation may be undertaken and establishes the types of controls that may be imposed under an order. The controls that are permitted under marketing orders for fruits and vegetables generally fall within two categories -- quality and volume restrictions. Regulation of quality relates to limitations prescribing the grade, size quality, or maturity of the commodity which may be shipped during a specified period. Such regulations are designed, primarily, to place a better product on the market through prohibiting the shipment of the less desirable grades and sizes.

Volume regulations may take one of several forms. One method of volume control is the regulation of the flow of shipments to market, under which shipments of the commodity during a given period are limited to a prescribed quantity. This type of regulation is concerned with tailoring the supply to the demand so as to prevent periodic gluts and scarcities in the market There may or may not be an accompanying reduction in the total quantity marketed during the season.

This method of volume regulation may require diversion of a specified percentage of the production of the commodity to prescribed outlets or may establish a reserve pool of the commodity with the proceeds from sales from the reserve pool being distributed equitably to those who contribute to it.

In addition, marketing orders for fruits and vegetables may provide for container regulation, marketing research and development projects, posting of selling prices, and prohibition of unfair methods of competition and unfair trade practices.

Administration

Marketing agreement and order programs for fruits and vegetables are administered locally by committees established in accordance with the provisions of the particular program. Such committees vary from program to program according to the institutional characteristics of the industry concerned. In some instances the committees are composed of both growers and handlers members while in others all members are growers; or there may be two committees -- one of growers and the other handlers. Generally, where there are two committees, the grower committee administers the order and the handler committee acts in an advisory capacity. Each program provides the method of selecting the committee members and sets forth the powers and duties of the committees.

Regulation

Ordinarily, marketing agreement programs for fruits and vegetables do not automatically regulate the commodity concerned. Instead, regulations, as authorized by the program, are made effective at and for such time as needed. The administrative committee, established under the program, is responsible for recommending to the Secretary of Agriculture appropriate regulations. The provisions of the program require the committee to consider specified crop and market information in arriving at its recommendations and the supporting information is required to accompany the recommendation when it is submitted to the Secretary. When such a recommendation is received, the supporting information and other available data are analyzed and, if the recommendation is approved, an appropriate order is issued.

Expenses

The cost of the local administration of marketing agreement programs is borne by the industry concerned in accordance with the requirements of the Act. The expenses which the administrative committee may incur, together with the rate of assessment to be levied on shipments are fixed by the Secretary on the basis of the recommendations and information submitted by the committee. Any funds collected in excess of the actual expenses are returned on a prorata basis or credited on a prorata basis to the account of the handlers from whom the money was collected.

Development and Issuance

Before a marketing agreement and order program can be considered by the Secretary the members of a major portion of the producers and handlers must get together and reach a general understanding as to the provisions of the proposed program. When such an understanding has been reached, a request for a public hearing signed by members or organizations representint a majority of the producers and handlers, together with a copy of the proposal, must be submitted to the Secretary. Except in cases of emergency,

notice of the public hearing concerning the proposed program must be published in the Federal Register at least 15 days prior to the date set for the hearing. Copies of the notice of hearing are mailed to all known growers and handlers.

The hearing is held at one or more places within the area to be covered by the program, and all interested persons are given an opportunity to present under oath, their views concerning the proposed program. Since the details of any order issued must be supported by substantial and reliable evidence, it is extremely important to get complete discussion of all provisions of the program at the hearing.

From the record of the hearing and any briefs filed during the period allowed for the filing of such briefs, the Administrator of Agricultural Marketing Service prepares and files a recommended decision. This decision outlines the issues developed at the hearing, tells how the issues were resolved, and contains the terms of the proposed marketing agreement and order. The recommended decision is published in the Federal Register and a period of time allowed for the filing of exceptions to the program.

When the period for filing exceptions has expired the Secretary prepares and publishes, in the Federal Register, his decision with respect to the terms and provisions of the marketing agreement and order. The marketing agreement is then submitted to handlers for signature; and generally a referendum of growers conducted to determine whether issuance of an order is favored by growers. If the requisite conditions are met with regard to signature of the agreement by handlers and approval of the order by growers, the Secretary may then issue an order making the terms of the program mandatory upon all handlers in the area.

(For additional details concerning the procedures in connection with the development of market agreement and order programs, see pages 6-10 hereof.)

Effect of Program on Imports

A marketing agreement program for a domestic commodity does not regulate imports of that commodity directly, but since 1954 an amendment to the Agricultural Marketing Agreement Act has required that whenever specified domestically produced commodities are regulated by grade, size, quality, or maturity pursuant to the Act, the same or equivalent restrictions must be place upon imports of such commodities. These specified commodities are: tomatoes, avocados, limes, grapefruit, green peppers, Irish potatoes, cucumbers, eggplant and mangos. This is accomplished through regulation orders issued under the General Import Regulations. Such orders are currently effective on avocados, grapefruit, limes, and potatoes.

Programs Currently in Effect

At present programs are in effect upon the following commodities:

Fresh Fruits: California-Arizona grapefruit, California-Arizona lemons, Florida limes: Florida oranges, grapefruit, and tangerines; California-Arizona Navel oranges, California-Arizona Valencia oranges, Florida avocados; California Tokay grapes; Colorado peaches; Utah

peached, Georgia peaches; California Bartlett pears, plums and Elberta peaches. Oregon-Washington-California Winter pears

Dried Fruits and Nuts: California prunes, California raisins, California almonds; Oregon-Washington Filberts; Georgia-Alabama-Florida-Mississippi-South Carolina pecans; California-Oregon-Washington walnuts; California dates; California figs.

Potatoes: Colorado; Idaho and Oregon, Maine, Massachusetts-Rhode Island-Connecticut-New Hampshire-Vermont; Oregon-California, Eastern South Dakota; Southeastern States; Washington.

Vegetables: Colorado peas and cauliflower, Florida tomatoes.

Procedural Steps in the Development of a Marketing Agreement and Order for Fruits and Vegetables

The precedural steps usually followed in the development of Marketing Agreement and Order are as follows:

A Preliminary:

(1) Educational program: Meetings of producers and handlers of the commodity in the area to be covered by any proposed marketing agreement and order are not only desirable; they are practically indispensable to the success of formal steps that may be taken in the development of the program.

(2) Request for hearing: When producers and handlers of a commodity have determined that a marketing agreement and program order is a desirable means of improving marketing conditions, and when they have agreed generally upon a specific form of marketing agreement and order, requests for a hearing on their proposal may be submitted to the Secretary of Agriculture. A request for a hearing by the commodity group is essential if hearings are to be held and the proposed program is to be authorized.

B Formal Procedures:

(1) Notice of hearing
(2) The hearing
(3) Recommended decision
(4) Secretary's decision
(5) Referendum among producers
(6) Signing of Marketing Agreement and Issuance of Order
(7) Nomination of committee by industry and selection of committee members by the Secretary of Agriculture
(8) Organization of committee and operations as a 'going concern'

The following is a discussion of the step-by-step formal procedures:

(1) Notice of hearing: Upon request for hearing from a commodity group such as potato producers in a specified state or area, the Fruit and Vegetable Division, Agricultural Marketing Service, prepares a docket containing:

(a) Official notice of where and when the hearing is to be held, and
(b) The proposed marketing agreement and order on which the hearing is to be held.

At least 15 days' notice of hearing is required after this docket is published in the Federal Register.

(2) The hearing:
The hearing is held in the producing area at some point or points convenient for producers and handlers to attend All interested persons are invited to participate by offering testimony under oath with respect to the handling of their commodity and, particulary with respect to the necessity for an economic desirability of each specific provision of the proposed marketing agreement and order. Cross questioning of each witness is authorized. Each and every interested person is given an opportunity to be heard. A record is made of the testimony offered on the proposed program. The record of hearing is forwarded to the U. S. Department of Agriculture, Washington, D. C. It is open for inspection there by any interested party. Any person who wished to do so may obtain a copy of the record from the reporter provided he makes prior arrangements with the reporter and pays the required fee for the copy.

(3) Recommended decision: As soon as practicable following the close of the hearing, the Deputy Administrator for Marketing Services, Agricultural Marketing Service, develops a recommended decision with respect to the proposed marketing agreement and program, which decision is based upon the evidence in the record of hearing . The recommended decision contains the following:

(a) Preliminary statement. This is a summary description of proceedings to date, and a statement of the material issues at the hearing.

(b) Findings and conclusions. The findings and conclusions with respect to the material issues raised at the hearing are based upon the evidence introduced at the hearing.

(c) A proposed marketing agreement and order which are determined to be the appropriate means for carrying out the findings and conclusions.

(d) Notice to all interested parties with respect to filing of exceptions to the recommended decision within a specified time limit.

(Note: The recommended decision is published in the Federal Register of the United States.)

(4) Secretary's decision. After exceptions have been considered, the Secretary renders a decision based upon the record. This includes:

(a) A statement of his findings and conclusions upon all the material issues at the hearing.

(b) A ruling upon each exception to the recommended decision filed by interested persons.

(c) A proposed marketing agreement and order which are determined to be the appropriate means for carrying out the Secretary's findings and conclusions.

(Note: The Secretary's decision usually adopts the substance of the recommended decision, and this decision is published in the Federal Register.)

(5) Referendum order: At the same time that the Secretary renders a decision which determines that a marketing agreement and order are the appropriate means for carrying out his findings and conclusions, he may also issue an order directing that a referendum shall be held among producers of the commodity in the area to be covered by the proposed order in order to determine if they favor the issuance of an order which shall have the same terms as the marketing agreement. The Secretary must determine, before issuing the order, that two-thirds of the producers, by number or volume of production, favor the issuance of the order. Usually the referendum is employed to aid him in this determination. When the referendum approach is followed, the referendum order provides for:

(a) Designation of an agent to conduct the referendum, and
(b) instructions to the referendum agent. The agent is instructed to

(i) conduct the referendum;
(ii) determine the time of commencement, duration, and termination of the referendum;
(iii) determine the necessary number of polling places;
(iv) arrange for balloting of producers;
(v) designate any employees of the Department of Agriculture or any other person to assist him in conducting the referendum and direct these persons to perform certain functions, such as, acting as polling officers;
obtaining the name and address of each person voting;
distributing ballots to any persons asking for ballots,
giving public notice of the referendum, and
reporting on the number of ballots cast at each polling place; and
(vi) report on the results of the referendum.

(6) Signing of Marketing Agreement and Issuance of Order: If it is determined that two thirds or more of the producers by number or by volume of production favor the issuance of an order, the Secretary can issue such order, Provided, That:

(a) Handlers who handle not less than fifty percent of the commodity covered by the order have signed a marketing agreement.

(b) If handlers who handle not less than fifty percent of the commodity covered by the order refuse or fail to sign a marketing agreement, then the Secretary may issue the order provided that he finds that the issuance of the order is the only feasible method of effectuating the declared purposes of the Act. Under normal circumstances, a period of 30 days must elapse between the date of issuance of an order and the effective date of any regulations.

When a marketing order has been issued, the industry has the enabling authority under which the program can be operated. The administrative committee may then be selected, and pursuant to its recommendations marketing restrictions may be issued by the Secretary. The committee also may consider and adopt a budget and recommend that this budget, with a rate of assessment, be approved by the Secretary. The committee also may recommend the adoption and approval of any other necessary administrative rules permitted by the order.

Persons interested in obtaining marketing agreements and orders should note that the time required for development of a marketing agreement and order requires several months. In addition to the time required for preliminary development through meetings of producers, and other interested persons, prior to the hearing, a minimum of six months should be allowed for the various steps from the opening of the hearing until the completion of the referendum and the signing of a marketing agreement and the issuance of an order upon the basis of a favorable referendum.

(7) Nomination of committee members and selection of the committee by the Secretary of Agriculture.

The administrative committee should be set up after the marketing agreement and order are put into effect. The first problem for the industry is to make known their choices for committee members. This is done in various ways, frequently through nomination meetings or in whatever way the industry wishes.

Nominations are sent to the Secretary who selects the committee members and alternates.

(8) The committee should organize as a 'going concern'. Its first jobs usually are about as follows:

(a) Election of a chairman and other officers.

(b) Locating headquarters and providing office space.

(c) Selection of a manager, other office help, and arranging for furniture and other equipment.

(d) Financing operations. Frequently it is necessary for handlers to advance funds, or loans must be obtained until revenue comes in from assessments on shipments.

(e) Arrangement for cooperation with other agencies, such as the Fruit and Vegetable Inspection Service.

(f) Consideration of marketing policy with recommendations to the Secretary and public announcements of recommendations and decisions.

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. AGRICULTURAL RESEARCH SERVICE
FIELD CROPS RESEARCH BRANCH

Influence of Varieties, Fertilizers, Cultural Practices and Pest Control on the Future Outlook for Rice Production in the United States*

During the past 25 years there has been a significant change in the rice varieties grown in the United States. This shift has been caused by changes in market demands, increased severity of diseases that caused serious reduction in yield of the varieties that were widely grown in the Southern area in the thirties, the change from the binder-thresher to the combine-drier method of harvest and the development and distribution of varieties that are more resistant to diseases and better adapted to the combine-drier method of harvest.

The acreage sown to short-grain varieties has varied during the 25-year period 1931-1955 from about 14 percent in 1931-35 to 18 percent during the 1951-55 period. The slight variation has been caused by changes in the proportion of the total crop that is produced in California and to minor changes in the varieties grown in the northern part of the Southern area. However, there has been a big reduction in the percentage of the crop sown to medium-grain varieties during this same period, as the 5-year average has varied from 73 percent in 1931-35 to 33 percent in 1951-55. This has been caused to a large extent by the susceptibility of Blue Rose and Early Prolific to diseases. Part of the acreage formerly devoted to these two varieties is now sown to Zenith and other new medium-grain types. However, much of that acreage was shifted to long-grain varieties. The percentage of the crop sown to long-grain varieties increased four-fold during the past 25 years, having increased from 12 percent in 1931-35 to 49 percent in 1951-55. This was caused by an increased market demand for long-grain rice and the development of highly-productive varieties of this type that are more resistant to the common diseases and better suited to the combine-drier method of harvest than the medium-grain varieties that were grown in the early years of this 25-year period.

It does not seem likely that there will be a wide shift in the relative proportions of varieties of the different grain types in the near future. However, rice growers should keep informed of new developments in order to be prepared to shift to the best varieties available in case market demand seems to justify growing rice of other grain types. Nato, a new medium-grain variety developed in cooperative experiments at the Rice Experiment Station in Louisiana seems to have many of the desirable characteristics of the long-grain varieties. It is productive, it has fairly satisfactory disease resistance and it seems to be suitable for the modern harvest methods. Only small amounts of seed will be available for 1956, but growers should keep informed on the performance of this variety for possible use in 1957 or later. Then too, growers in northern Arkansas and Missouri might consider growing short-grain varieties. There are short-grain varieties well suited for that area, and consideration should be given to shifting more of the acreage to this type if justified by continued demand for it.

The increased use of fertilizers in the last few years has been an important factor in the improved efficiency of rice growers in this country. Results of experiments and farmers' experience has demonstrated that nitrogen is almost universally effective in increasing the yield of rice. Yields usually are increased 10 to 15 pounds per acre for each pound of nitrogen applied. Phosphrus

*Prepared as background material for 1956 National Agricultural Outlook Conference, November 28 - December 1, 1955, Washington, D.C.

increases the yield of rice on many soils, and a response is sometimes obtained when potash is applied, although the results with these two fertilizers is not as universally consistent as it is with nitrogen. The requirements for fertilizer vary according to soil type and cropping history of the field. The grower should consult his county agent, and get an analysis of the soil if possible, in order to learn the kind and amount of fertilizer to use in order to get the most economical return.

The proper rotation of other crops with rice will give increased yields of rice and more efficient use of the land. In the Gulf Coast area, and to some extent in Arkansas, improved pastures in rotation with rice have given much better returns both of rice and pasture than have unimproved pastures. In the upper South, soybeans for seed, lespedeza for seed or pasture, or both of these crops with fall-sown oats have proven to be satisfactory crops to rotate with rice. In California, clover pasture as a summer crop and purple vetch as a winter-grown green-manure crop have given substantial increases in rice yields. The best possible rotation should be determined by each farmer basing his decision on results of experiments conducted in his area and practices followed by his most successful neighbors.

The grower should also follow best-known practices in order to produce highest-quality rice possible. This will broaden the market demand for the rice which will assure the highest possible return. Some of the factors to be considered are:

(1) Using seed of high quality and germination that is free of varietal mixture, red rice and other weed seeds.

(2) Treating the seed with an approved fungicide to help assure a uniform stand.

(3) Cultural practices should be used which will reduce weed growth, improve the physical condition of the soil, give a satisfactory seedbed, and improve the quality of the crop by seeding at the time best suited for the variety grown. Irrigation methods best suited to the conditions should be used in order to control weeds and diseases.

(4) Herbicides should be used when needed to control broad-leaf weeds so the best yield and quality will be obtained. Preliminary experiments indicate that methods may be developed for the control of grass and other weeds by using pre-emergence chemical treatments.

(5) Insecticides should be used when necessary to control insects that cause a reduction in yield or quality of the crop.

(6) The rice should be cut at the correct stage of development and then dried and stored in a manner that will preserve the highest quality.

The grower should consult his county agent for specific information on any of the topics mentioned.

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

Utilization Research Program on Oilseeds
Northern and Southern Utilization Research Branches*

OUTLINE OF PROGRAM ON OILSEEDS AT SURB

The objective of all of the research on oilseeds is to increase the utilization of these commodities. Commodities with which the Southern Utilization Research Branch is concerned are: cottonseed, peanuts, tung fruit and rice bran. The situation with respect to oils is one of surplus--both of edible and drying type oils. High quality protein feeds are not in a surplus position. Our research program changes to meet current needs.

The types of research which are being carried out can be divided into two categories: first, research to improve the quality of products; second, research to develop new products and create new uses. Under the first category, quality research may improve the competitive position of one oilseed to another. It may also lower the cost of oil by increasing the value of the coproduct or by-product. Research on a coproduct or a by-product may even lead to the creation of a new product or new markets for materials. An example of research in this category is the investigation of cottonseed processing to improve the nutritive value of the meal and to render it suitable for unrestricted feeding to swine and poultry. Experiments are underway on special cooking procedures using the addition of chemicals to produce cottonseed meal of higher protein quality and low gossypol content. A part of this program involves development of chemical tests to measure nutritive value of cottonseed meal, and an investigation of the nature of bound gossypol which is formed during cooking of cottonseed.

Another type of research in the same category is research to improve the color of cottonseed oil. Many cottonseed oils require special processing in order to be used in high quality shortening. This constitutes a problem whose solution would render cottonseed oil more competitive with other oils. In the research on cooking of cottonseed referred to above, some of the procedures have yielded oils of improved quality. Another approach to this problem is the basic research to determine the pigments present in cottonseed oil which are responsible for the dark color and from a practical standpoint to find ways of removing these pigments.

Recently completed is an investigation of the quality improvement of peanut butter. An investigation is now underway to determine the relation of quality in peanut products to composition or to variation in composition or components. The ultimate objective is to determine what factors are responsible for the quality of peanuts which have been grown, harvested or handled under well defined conditions, so that better quality peanuts can be delivered to the processor of edible peanut products.

Research on tung fruit is carried out at a field station of this Branch in Bogalusa, Louisiana. Tung meal is toxic and some research is being done to isolate the toxic constituents of the meal, to determine whether they can be removed and to determine by some suitable chemical test whether the meal has been rendered nontoxic.

*Prepared for use in connection with 1956 National Agricultural Outlook Conference, November 28 - December 1, 1955, Washington, D.C.

Under the second category in the development of new uses and new products from fats and oils, attention is being given particularly to new uses in those fields which are expanding. There are two types of work under which this program may be divided. The first is food uses. This does not apply to fats and oils as a source of calories since it is doubtful whether increased markets can be anticipated in this field other than those which would gradually follow increase in population. However, there are good prospects for products which may be developed from fats which will have useful properties as coatings to protect foods from moisture loss and quality deterioration. Here, the products would need to be edible but would not necessarily be consumed for their caloric value and might even be removed from the food before being consumed. Research has been carried out on the modification of glycerides to incorporate short chain fatty acids which have given acetostearins, waxy, translucent, flexible fats, which appear promising as coatings for foods, meat, fruits, etc. The unsaturated corresponding fatty acid products are aceto-oleins which have the property of increasing the plastic range of hard fats and which have been used in compounding an edible spread of long plastic range for the Quartermaster Food and Container Institute. The requirements for such a spread are that it must be spreadable near freezing temperatures and stable for six months at 100°F. both physically and from the standpoint of flavor. The spread formulation which is being tested uses peanut oil as one of its ingredients. The acetoglycerides have promise as plasticizers, food coating ingredients, ingredients of strippable plastics, etc. At least two industrial firms are making aceto-glycerides on a pilot plant basis.

Another use for oils which is not exactly a food use is in intravenous alimentation. Here emulsions of fat are required which can be given intravenously to supply calories to those people who cannot eat or who cannot absorb fat normally in the gastro intestinal tract. This program is supported by the Office of the Surgecn General.

In the industrial or nonfood uses, particular attention is given to the chemical industry and those fields which show great potential or possibilities of expansion. Such fields are plastics, plasticizers, lubricants, surface active agents ar agricultural chemicals.

Cottonseed oil or the acids from cottonseed foots have a high content of linoleic acid. Exploratory investigations are being carried out on the production of new compounds by the reaction of various reagents at the double bonds of linoleic acid. These new compounds include nitriles, hydroxy-acids and sulphur compounds. Research is also being carried out on cottonseed oil foots to learn more about its composition and any new or unusual materials which it might contain.

Research is continuing on tung oil. New chemical reaction products are being prepared which may have value as surfact active agents, polyester resins, sizes, agricultural chemicals, etc. Samples of materials prepared under these research programs are being sent to the Chemical and Biological Coordination Center for testing for biological activity, and when they become available samples of promising materials will be evaluated in various industrial laboratories through the cooperation of industry.

GOVERNMENTAL MARKETING SERVICES AND PROGRAMS FOR FRUITS AND VEGETABLES

This summary of governmental marketing services and programs is intended as a handy reference list of sources of information with a highly abbreviated description of each. If more detailed descriptions or information about particular services or programs are desired, communicate with the Agricultural Economic Programs Division, Federal Extension Service, or directly with the appropriate agency or division as indicated below.

Marketing Services

AGRICULTURAL ESTIMATES DIVISION --- S. R. Newell, Director

1. Fruit and Vegetable Statistics Branch --- Reginald Royston, Chief

The Crop Reporting Board of the Department of Agriculture provides the nation's basic statistics on crop and livestock production. In the field of fruits and vegetables, the principal types of information available by groups of commodities are:

(a) 5 Citrus Fruits, 17 Deciduous Fruits and 5 Tree Nuts - Monthly forecasts are issued of production and end-of-season estimates of production, farm disposition, utilization of sales, season-average price and value. Monthly prices for 4 citrus and 3 deciduous fruits also are provided.

(b) Irish Potatoes and Sweetpotatoes - Estimates are provided of intended planted and harvested acreage, monthly forecasts of yield per acre and production, and end-of-season estimates of yield per acre, production, farm disposition, monthly and season-average prices and value. For Irish potatoes only, a January 1 stocks report is issued.

(c) 28 Principal Commercial Vegetables for Fresh Market - Monthly estimates by seasons (based on time of harvest) are published covering acreage for harvest, monthly forecasts of yield per acre and production, and end-of-season estimates of planted acreage, acreage for harvest, yield per acre and production, both available for sale and sold, season-average prices and value. Monthly prices are provided on a national basis only for 15 crops. December 1 and January 1 stocks of cabbage in New York State and January 1 stocks of onions in the storage-crop states are provided annual estimates on a national basis only of the commercial production of all vegetables.

Prepared for the 33rd National Outlook Conference, Fruit and Vegetable Work Session, U. S. Department of Agriculture, Washington, D. C.

(d) Principal Vegetables for Commercial Processing - Estimates are made of intended, planted and harvested acreage, monthly forecasts of yield per acre and production, and end-of-season estimates of yield per acre, production, season-average price and value. For 3 crops, separate estimates are issued on a national basis of acreage, production, season-average price and value for freezing and for canning and other processing. For pickles, and October 1 stocks report is published.

The primary objective of the monthly crop reports is to give a timely picture of current and prospective supplies so growers and others can make intelligent decisions regarding production and marketing problems The secondary objective, which is the principal reason for the annual crop summaries, is to compile similar information on a historic basis for the use of agricultural research workers and for comparison with the monthly forecasts.

2. Cold Storage Reports --- M. R Banks, Head, Cold Storage Section

Information on national cold storage holdings of fresh and frozen fruits and vegetables is being made available upon request to the trade and other interested persons through a series of monthly market information reports. Warehouse stocks of various fruits and vegetables are reported periodically by the operators of public, private, and semiprivate storage facilities. Not included in this group are wholesaler, jobber, and other facilities used for holding products less than 30 days. The Cold Storage Reports are released at 2:00 p.m. (Washington time) on the 15th of each month.

B. AGRICULTURAL ECONOMICS DIVISION --- Frederick V. Waugh, Director

1. Statistical and Historical Research Branch --- James P. Cavin, Chief

The Fruit and Vegetable Situation Reports, published quarterly, present a comprehensive review and outlook statement for fruits and vegetables based on analyses of trends and current developments in fruit and vegetable data and other physical and economic factors. The reports are distributed to all interested persons. They are useful in interpreting changing conditions in marketing these commodities, for both professional agricultural workers and those engaged in the industry.

C FRUIT AND VEGETABLE DIVISION --- S. R. Smith, Director

1. Market News Branch --- C. D Schoolcraft, Chief

The Fruit and Vegetable Market News Service was established in 1915, and has operated since that time to provide the industry with current, unbiased information on supplies, movement, distribution, demand, prices, and other factors affecting the marketing of fruits and vegetables.

The Market News Service collects information while markets are being made and distributes this information as rapidly as modern communication facilities will permit. Market reports are disseminated by mail, leased wire, newspapers, radio, television, press associations, telephone, and personal contact.

The Fruit and Vegetable Market News Service now operates offices under the supervision of Federal reporters in 24 terminal market cities on a year-round basis and in 24 producing and shipping areas during the active harvesting and marketing season. Many of these offices are financed by Federal and State agencies under cooperative agreement. In addition, State offices operating under cooperative agreement issue fruit and vegetable reports in 15 markets or capital city offices and 8 shipping point offices. Cooperative agreements are in effect with 31 States and the Territory of Hawaii.

Terminal market reports include information on prices and conditions on the local wholesale market, together with data on rail and boat receipts, unloads and track holdings, and in some markets on truck receipts. This local information is supplemented by reports on carlot shipments, reports from important producing areas, and limited information from other terminal markets.

Shipping point reports usually cover a single commodity or group of commodities of interest in a local or regional producing area. These reports cover prices and conditions in the local area and competing producing areas, carlot and in some cases truck shipments, on some deals rail distribution information, and information as reported from various terminal markets in the general marketing area of the commodities covered.

Terminal market offices issue monthly and annual summaries on rail and boat unloads, and truck receipts where reported. Shipping point offices issue seasonal or annual summaries covering the marketing of specific commodities. The Washington office issues weekly and annual summaries covering shipments, annual summaries on unloads of major commodities in 100 U. S. and 5 Canadian cities, and annual summaries of f.o.b. prices and terminal market prices for New York and Chicago.

2. Fresh Product Standardization and Inspection Branch -- E. E. Conklin, Chief

The Fresh Products Standardization and Inspection Branch of the Fruit and Vegetable Division, AMS, is responsible for developing and keeping up-to-date by periodic revision the U. S. Standards for fresh products and the maintenance of an Inspection Service to inspect and certify upon request the grade, quality and condition of lots of produce for financially interested parties.

Since 1917, U. S. Standards have been issued for most of the fruits and vegetables and some special products including peanuts and important edible tree nuts. Three types of standards are maintained, namely, those used primarily in wholesale trading, those used as a basis for contract between

growers and processors for raw products for processing, and consumer standards used for packing and sale of produce in consumer-sized package at retail. The U. S. Standards are permissive in character although in some instances they become compulsory through provisions of State laws or Federal Marketing Agreements and Orders. Owing to different uses and styles of products packed, several standards are often necessary for one product. At present the Department has issued 144 standards for 77 different products which includes 40 standards for 21 different fruits, 87 standards for 48 different vegetables and 17 standards for 8 products not classed as fruits and vegetables.

The Inspection Service of the Branch directs two lines of inspection activities, Market Inspection and Shipping Point Inspection. The over-all program is directed from the Washington office through three district supervisors, their assistants and 34 area supervisors. The Service is virtually supported on a fee basis. Market inspection offices are located in 78 principal cities and inspection by Federal inspectors is available to applicants on lots of fresh fruits and vegetables at $10.00 per car for quality and condition or $8.00 per car for condition only. Transportation costs and other necessary expenses are added for inspections made in cities where inspection offices are not located. Shipping Point Inspection by Federal-State inspectors is available to applicants under existing cooperative agreements which agencies in the 48 States, Puerto Rico and Hawaii. In general, charges for Shipping Point Inspection range from about $6.00 to $12,00 per car depending on the State in which the inspection is made and the product inspected.

During the 1955 fiscal year the Inspection Service inspected 1,320,817 carlot equivalents of fresh products. Included in this total were 48,291 cars for tradesmen in receiving markets, 54,526 cars of supplies for public and private agencies, 724,574 cars for commercial shipment at shipping points, 457,104 cars of raw products for processing, and 36,322 cars of Farmer's Stock Peanuts.

3. Processed Product Standardization and Inspection Branch - F.L.Southerland, Chief

The Processed Products Standardization and Inspection Branch of the Fruit and Vegetable Division is concerned with two major service programs. One is developing and revising grade standards for processed fruits and vegetables and a host of miscellaneous processed foods and the other one is conducting and maintaining an inspection service to determine compliance with the grade standards, upon request of financially interested parties.

The objectives in developing and revising grade standards for processed foods are to assist processors in doing a better job in packing these foods by developing for them a uniform yardstick with which to measure important variations in the quality of the product; to aid them in selling their product; to aid buyers in selecting the grade or quality to best suit their particular customers; to facilitate trading between sellers and buyers; to aid bankers or others who make loans in arriving at fair loan values; to aid shippers,

public warehouses and public transportation companies in the settlement of damage claims and to improve the general over-all quality of processed fruits and vegetables with the view in mind of better satisfying consumers, which, in the end, benefits growers who make improvements in producing better fruits and vegetables for processing.

The standardization work is performed by a staff of food technologists in the Branch who have specialized in standardization work. Data for developing standards are obtained by examination of representatives samples of the different qualities packed, which may include chemical and microscopic examinations of such samples, making personal contacts with individual processors, industry groups or industry association technical committees, distributors, Federal and State research and marketing specialists and other scientists, obtaining the views of field inspectors of the Branch and securing data from other sources which may be available and useful in the development of a standard. Based on the data obtained, the standards are drafted and discussed with the industry concerned before they are published in final form for use. In order to aid in more uniform interpretation of the standards studies are made to evaluate objective tests and methods, including the development of models, photographs and permanent glass colors to illustrate the requirements of different quality factors and to eliminate the human element of judgment. The Branch has developed over the past 25 years 124 standards for processed foods.

The standardization program includes giving assistance in development of Federal Specifications which are used by the military and civilian agencies including cities and States, for their use in making purchases of processed foods to suit their particular needs.

The inspection service is organized with headquarters in Washington, D. C. and three District Offices which are located in San Francisco, Chicago and New York City, respectively. The inspection service is staffed with approximately 400 well trained inspectors Thirty-three inspection offices are established and are located in the major producing areas, including Hawaii and Puerto Rico, and in many of the large receiving markets.

Inspection is accomplished through one or more methods or precedures, depending upon the desires of the applicant for the service. These procedures consist of what is known as "Continuous Inspection," Plant Inspection Pack-Certification Service," "inspection of specific lots," and "inspection of unofficially submitted samples." The greatest volume of inspection work performed is accomplished by makring inspection of specific lots located in warehouses and storages.

The extent of the use of the standards and the inspection service may be indicated by number of requests for grade standards received each year from interested persons, which ranges from 30,000 to 60,000 copies per year. The inspection service inspected approximately 20 percent of the entire output of the canned fruits and vegetables last year and approximately 80 percent of the entire production of frozen fruits and vegetables.

4 Regulatory Branch --- J. J. Dimond Chief

The Regulatory Branch of the Fruit and Vegetable Division is charged the enforcement of the Perishable Agricultural Commodities Act, the Standard Container Acts and the Export Apple and Pear Act

Most of the work of this Branch is devoted to complaint and license work in connection with the PACA.

The Perishable Agricultural Commodities Act requires commission merchants, dealers and brokers engaged in the business of handling fresh or frozen fruits and/or vegetables in interstate or foreign commerce to obtain a license.

The purpose of the Perishable Agricultural Commodities Act of 1930 is to suppress unfair and fraudulent practices in the marketing of fresh and frozen fruits and vegetables.

This Act was sponsored by fruit and vegetable shippers and buyers because rapid market price fluctuations in these perishable products tended to encourage rejections by buyers or failure to deliver by sellers under existing contracts without reasonable cause. Also, growers or shippers in many instances had no effective method of determining if incorrect accountings of sales were given by commission merchants or brokers located in distant markets.

Enforcement of the Act is obtained by requiring a license at an annual fee of $15.00 for all persons engaged in interstate or foreign commerce of these products. Violations of the provisions of the Act make a person subject to suspension or revocation of his license. The penalty for operating without a license is not more than $500 for each such offense, plus $25 for each day the offense continues. However, if the failure to obtain a license was not willful, the applicant is granted a license at the standard $15.00 fee plus arrearage at this annual rate for the period during which his operations were subject to license. The costs of administering the Act are paid from the fees collected and there are no appropriations made nor other charges assessed against a person who files a request for assistance or action under it.

Reparation complaints under this Act involve failure to pay, unjustified rejection, failure to render accurate accountings in connection with consigned lots, misrepresentation, etc. Disciplinary complaints usually involve misbranding, failure to maintain adequate records, operating without a license or after the operator's license has been suspended or revoked. Approximately 27,000 licenses were in effect on August 1, 1955, and during the 1955 fiscal year, more than 3,100 complaints were handled under this law.

Complaints are also handled under the Produce Agency Act, a criminal statute. Any product of a farm shipped on consignment in interstate commerce is covered by this Act. Under the Standard Container Act, a continual check is made

on the products of the manufacturers of various types of containers in order to determine that the containers comply with the specifications and requirements of the laws. The Export Apple and Pear Act is designed to maintain the high quality and good reputation of U. S. produce destined for export.

The Regulatory Branch maintains field offices in New York, Chicago, Los Angeles, Fort Worth and Winter Haven, Florida.

D. FOREIGN AGRICULTURAL SERVICE - -- Gwynn Garrett, Administrator

1. Fruit and Vegetable Division --- D. M. Rubel

The Foreign Agricultural Service, U S. Department of Agriculture, including its Agricultural Attache staff aids those interested in the exports or imports of agricultural commodities and their products. This service includes such functions as the providing of information, facilitating interested parties in communicating with their counterparts in other counties, providing liaison functions for individuals, industry groups and governmental agencies in the conduct of their business or responsibilities and for the purpose of improving international trade in agricultural commodities.

International trade usually is much more complex than domestic trade because of such factors as differences in language, currency, exchange rates, economic conditions, traditional consumer preferences, bilateral and multilateral agreements and governmental policies. The Foreign Agricultural Service aids in meeting some of these problems and seeks to protect and aid domestic industries through available means. On the information side, in addition to direct communication, it publicizes through such media as Foreign Agricultural Trade, Foreign Crops and Markets and specialized reports, necessary general material of routine nature on a world-wide and localized basis. In meeting particular problems it aids industry groups in obtaining the benefits of "tools" available to them under appropriate international agreements and legislation. Some of the latter include:

IMPORTS

Section 22 of the Agricultural Adjustment Act, as amended, provides that fees or quantitative limitations may be imposed whrn necessary to prevent imports from materially interfering with any program or operation of the Department. Action has been taken on limitation of imports of specified tree nuts when such imports were interfering with the successful operation of marketing agreement programs.

Section 336 of the Tariff Act of 1930, as amended, provides for import fees to equalize differences between foreign and domestic costs of production, provides the commodity is not included in a trade agreement entered into under another section of the Tariff Act. Most fruits and vegetables are included in such agreements.

The so-called "escape clause" -- Section 7 of the Trade Agreement Extension Act of 1951, as amended, may offer a possibility for action. Under this Section, any interested party may apply to the Tariff Commission for an investigation to determine whether, as a result of a trade agreement concession, imports are entering the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry. Action under this Section may either raise the duty or it may permit a tariff quota.

In connection with a proposed Section 7 action, Section 8(a) of the same Act directs that a decision be made by the President within 25 days, if the Secretary of Agriculture determines that, due to the perishability of the commodity, a condition exist which requires emergency action.

Please note that any application under Section 7 whould be sent directly to the Tariff Commission. If, in addition, the emergency treatment provided by Section 8(a) is desired, a request for such action should be submitted in duplicate to the Secretary of Agriculture. This request should include a statement of the reasons why the commodity is perishable, and why, due to such perishability, a condition exists requiring emergency treatment, and shall be supported by appropriate information and data. The latter should include a copy of the application to the Tariff Commission and of the data related to and shpporting that application.

EXPORTS

Public Law 480 -- The Agricultural Trade Development and Assistance Act of 1954, as amended, provides that 1.5 billion dollars may be used for the sale of surplus agricultural commodities for foreign currencies in friendly countries. A program is developed between the United States Government and the foreign government which provides a list and quantity of surplus agricultural products that may be sold and the use of the currencies that accrue from such sales. The actual sales and shipment of the products are made through commercial trade outlets. Several fruit items have been offered under programs developed pursuant to this Act but no sales have been consummated.

The Mutual Security Act provides for the exchange of United States products to friendly countries for their currencies. The currencies obtained under this Act must be used for military or economic aid in the country in which the products are sold. This program is handled by the International Cooperation Administration of the State Department. A fair volume of fruit and fruit products have been sold under this program.

E. Federal Extension Service -- Clarence M. Ferguson, Administrator
Division of Agricultural Economics Programs -- H. M. Dixon, Director

The primary responsibility for and leadership in all educational programs and activities including the administration of the Smith-Lever Act, as amended, educational and demonstrational work in cooperative farm forestry, and all educational and demonstrational aspects of the Agricultural Marketing Act of 1946.

It is responsible for the coordination of all educational activities of the Department, including examination and analysis of all such activities current and contemplated, review and approval of all educational activities or proposals prior to initiation, advice and consultation on planning with heads of agencies, and reports and recommendations to the Secretary.

It acts as the liaison between the Department and officials of the Land-Grant Colleges and universities on all matters relating to cooperative extension work and educational activities relating thereto.

Within the framework of such functions the Federal Extension Service would carry on all educational work in the field of production and marketing fruits and vegetables.

Marketing Programs

A. FOOD DISTRIBUTION DIVISION --- M. D. Garber, Director

1. Food Trades Branch --- G. Chester Freeman, Chief.

The U. S. Department of Agriculture's Plentiful Food Program

The Plentiful Foods program helps increase the movement of foods in plentiful supply through normal channels of trade This is done by enlisting the co-operation and merchandising know-how of the food distribution industry and the promotional and educational resources of the various information media. By calling attention of large-scale buyers and homemakers to foods designated as plentiful, sales are stimulated during periods when peak supplies are being moved to markets. By placing increased emphasis on food items which may be temporarily in surplus supply or even a glut on the market, a three-fold purpose is served: (1) increased consumption aids the producer by creating improved demand; (2) increased consumption means more sales or profit for those who deal in that commodity in the market place, (3) and consumers benefit by relative economy generally represented by a food which is plentiful in contrast to one in less abundant supply.

The program is entirely a cooperative activity and receives excellent support from private industry. To an increasing extent, food distributors and allied groups look to the Department's Plentiful Foods program for guidance in determining how best to use their merchandising resources to assist in the orderly movement of food supplies through regular trade channels.

The regular service that the program offers is a monthly list of foods determined to be in such supply that additional merchandising attention is needed to move them into the hands of consumers. These lists go to all segments of the food trade and seek their cooperation in stimulating sales of these foods through advertising displays and other promotional means. The list is also sent to newspapers, radio and TV stations throughout the country, as well as national magazines and other publications reaching both the public and food selling organizations. Simultaneously, food trade

representatives in the Department of Agriculture field offices work directly with food distributors in key market areas throughout the country. They direct the attention to the listed items by letter, telephone and personal visits with wholesalers, jobbers, retailers, restauranteurs and others, asking for their support by increasing their merchandising activities on the designated foods. Meantime, additional background material on the designated foods is furnished to all those in the information field who advise consumers -- to magazines and syndicates, advertising agencies, newspaper food editors, radio and TV food commentators. The flow of this material starts with the establishment of the list and is maintained throughout the month to which the list applies.

Special Plentiful Foods Merchandising programs are similar to this, but far more extensive. These special merchandising "drives" are conducted for foods when supplies are so large that they have created serious market problems and are conducted only at the request of producers and after assurance that the particular industry itself will actively participate. The Department's role in these special merchandising drives is to develop a coordinated ... program on the part of producers, the food industry and the Government in concerted effort to increase sales to consumers. To achieve the best possible results, the need for a program, proper timing, extent and intensity of the drive must be determined. It is in this field that the Department has been most successful in creating the understanding and obtaining the cooperation of the many and varied groups that can assist in a program of this type. Industry participation in these programs has now increased to the point where they are most accurately identified as industry-government promotions. Major efforts on special drives are concentrated in the large metropolitan areas where the greatest impact of consumer demand can be made.

The Plentiful Food Program is administered through the Food Distribution Division of the Agricultural Marketing Service, with the cooperation of the Extension Service and other agencies of the Department.

Additional information about the Plentiful Foods program may be obtained from the following offices:

Area Field Office
Food Distribution
Agricultural Marketing Service
U. S. Department of Agriculture

NORTHEAST	139 Centre Street, Room 506 New York 13, New York
SOUTHEAST	50 Seventh Street, N.E., Room 252 Atlanta 5, Georgia
MIDWEST	226 West Jackson Blvd., Room 1412 Chicago 6, Illinois

SOUTHEAST — 1114 Commerce Street, Room 1812
Dallas 2, Texas

WESTERN — Room 404 Appraisers Building
630 Sansome Street
San Francisco 11, California

2. School Lunch Branch --- Herbert D. Rorex, Chief
Direct Distribution Branch --- James A. Hutchins, Jr., Chief

Section 6 Commodities

Approximately 80 percent of the $406 million worth of food used in the School Lunch program last year was purchased by schools from their local suppliers. Such purchases are made with funds from local and State sources and from cash assistance provided through the National School Lunch Act. (P.L. 396, June 4, 1946: 79th Congress). However, Section 6 of that Act provides that the Secretary of Agriculture may use a part of the school lunch appropriation to purchase additional foods for distribution to those schools participating in the National School Lunch Program. It is anticipated that approximately $15 million of the $83.2 million appropriated may be spent for Section 6 purchases in the fiscal year 1956. In considering the commodities to be purchased with Section 6 funds, primary emphasis is placed upon foods which will help meet the requirements of the Type A lunch and provide specific nutrients such as Vitamin A and Vitamin C, which studies show are often lacking in children's diets.

In addition to the considerations noted above, it is fundamental in the purchase of commodities under Section 6 that the Department acquire the most food for the dollar spent. For this reason although Section 6 purchases are in no way considered as surplus removal, market conditions do play an important part in the quantity and in the types of foods purchased

The commodities which have been purchased for distribution during the fiscal year 1956 include: dried apricots, canned cherries, grapefruit sections, green peas, tomatoes and peanut butter. Other commodities may be acquired to complete this year's Section 6 program, but no final purchases have been made.

FRUIT AND VEGETABLE DIVISION --- S R. Smith, Director

1. Acreage-Marketing Guides

Vegetable Branch --- K W. Schaible, Chief

Acreage-Marketing Guides for Vegetables, including potatoes and sweetpotatoes, are announced each year by the U. S. Department of Agriculture to aid growers in development of their planting plans according to seasons. The program provides the best possible estimates of the acreage of particular vegetables required, with average yields, to supply the quantity of these vegetables deemed necessary to meet the market needs anticipated for the coming season. In the development of the guides, consideration is given to forecasts of economic conditions together with such information as stocks, rates of disappearance, production and price trends, and competition with other commodities. The program is directed toward balancing the supply of each vegetable with the demand for it. While compliance is voluntary the program provides the vegetable industry with the kind of basic planning that every big and

successful industry undertakes in the development of production and marketing program for a year ahead. When growers have kept within the acreage levels recommended by the Department, few marketing difficulties have been encountered. Dissemination of the guides information and the educational phases of the program are carried on cooperatively by the Extension Service and the Fruit and Vegetable Division, AMS.

2. Marketing Agreements and Orders

Fruit Branch -- P. A. Nicholson, Chief
Specialty Crops Branch -- J. C. Genske, Chief
Vegetable Branch -- K. W. Schaible, Chief

Federal marketing agreement and order programs regulate the handling of agricultural commodities in interstate or foreign commerce. They may also cover intrastate movement which burdens, obstructs, or affects interstate commerce. These programs are based upon the Agricultural Marketing Agreement Act of 1937, as amended. They reach back legislatively beyond 1937, however, to the Agricultural Adjustment Act of 1933, and their legislative genesis can be traced farther back to the post-World War I, and even prewar, cooperative efforts of farmers to improve the quality of the commodities marketed and to balance shipments to the market demand.

Basically, the objective of a marketing agreement and order program is to increase returns to producers. The Congress provided, however, that the interests of consumers were to be protected also. The original provisions of the Act stated that it was the declared policy of Congress to: (1) establish and maintain such orderly marketing conditions for agricultural commodities as will return parity prices to farmers, and (2) protect the the interest of consumers by approaching the parity level gradually and by taking no action for the purpose of maintaining prices above parity. Subsequently, this policy was enlarged to authorize, for specified commodities, the establishment of: (1) such minimum standards of quality and maturity and such grading and inspection requirements "as will be in the public interest" and (2) such orderly marketing conditions as will provide, "in the interests of producers and consumers," an orderly flow of supplies to market during the normal marketing season "to avoid unreasonable fluctuations in supplies and prices."

A more complete discussion of these programs is included elsewhere in this Outlook Conference Fruit and Vegetable Work Session Material.

3. Marketing Clinic

Fruit Branch --- P.A. Nicholson, Chief
Vegetable Branch --- K. W. Schaible, Chief

Marketing Clinic Program

The Fruit and Vegetable Division has undertaken a marketing clinic program on a limited scale for the express purpose of assisting the industry in analyzing and solving its own marketing problems. The clinics are industry-

sponsored with some assistance from the Department in setting up the program. They may be national in scope or conducted on a local or regional basis. Participants may be made up of growers and representatives of grower organizations, bankers, processors, shippers, and handlers or representatives of their organizations, extension personnel, university and experiment station people plus interested State and Federal inspection and marketing officials. The program is set up to encourage participation of all those present and to bring together the latest and best available information on production and marketing of the various fruit and vegetable crops. This includes production and acreage trends, the supply and demand situation (foreign as well as domestic), historical price data, marketing costs, merchandising practices, and handling and storing methods. The operation of Government programs such as marketing agreement and orders, surplus removal through Section 32 purchases, School Lunch supply with Section 6 funds, export subsidy, and other diversion programs also are discussed to bring out industry reaction to them. The research activities of industry, State and Federal organizations are presented and discussed toward improving the present products and marketing practices as well as developing new products and uses for the commodity under study. All this information is developed to enable the participants to discuss and attempt to solve the immediate marketing problems and work toward the solution of the long-range problems as well. Possible solutions to the marketing problems are discussed and recommendations or proposals are developed by the group for positive action to be taken in an attempt to correct the immediate situation and plan a long long-range marketing program.

The Fruit Branch has participated this past year in marketing clinics with the citurs industry, Eastern apple industry, the lemon industry, and the Kadota fig industry. It is contemplated that the marketing clinic program may be extended to some of the other fruit industries where distribution and surplus problems arise. Annual clinics may be extended to some of the industries other than the citrus and Eastern apple group which have been conducted on an annual basis.

As its initial project under this program, the Vegetable Branch is cooperating with the Extension Service in a survey in 25 counties in East Texas with the purpose of developing a more effective marketing program for vegetables in the area. Requests have been received and similar work is contemplated in several other States.

4. Section 32 Surplus Removal

Fruit Branch --- P. A. Nicholson, Chief
Specialty Crops Branch --- J. C. Genske, Chief
Vegetable Branch --- K. W. Schaible, Chief

Section 32 of Public Law No. 320, 74th Congress, as amended, provides authority for lending a degree of stability to the marketing of fruits and vegetables. Money available for this purpose can be used when the situation warrants for (1) encouraging exports by the payment of export benefits or of indemnities for losses in connection with such exports; (2) encouraging domestic consumption by diverting the commodity from the normal channels of

trade or by purchases and donations to the school lunch program, eligible institutions, and for relief purposes, or (3) making payments to farmers in connection with normal production for domestic consumption in order to reestablish farmer's purchasing power. No fruit or vegetable programs have been carried out under Clause (3) in recent years. In administering operations under Section 32, the Department's objectives are to provide limited price assistance to farmers confronted with price depressing surpluses, to expand foreign markets for surplus American farm products, to improve the diets of school children and needy persons, and to encourage new uses or new markets for commodities diverted from the normal channels of trade.

In attaining these objectives for fruits and vegetables, operating methods are kept relatively simple. In an export program, the exporter is informed as to the amount of the export payment established per unit. Foreign buyers may then buy from their domestic suppliers at prices below domestic market prices, by the amount of the subsidy. The transaction is handled through regular trade channels, and after export the supplementary export payment may be claimed.

Commodities purchased in an area of surplus are bought by USDA field personnel, generally from growers, grower's agents, or grower associations. Quantity purchases is limited to that which can be utilized in the school lunch program and by eligible institutions. Section 32 funds are used to pay also for shipping the commodity to central receiving points within States, and State distributing agencies take over the job of allocating to eligible recipient organizations. In a diversion program, the government does not acquire ownership of the commodity but makes a payment to the diverter conditioned upon his use of the commodity in the approved outlet. Outstanding advantages of this type of program in instances of heavy surplus are the high rate of disappearance obtained per dollar expenditure (usually no grading, packing or transportation costs), coupled with the fact that lower qualities tend to go to the diversion outlet leaving the better qualities for commercial trade. The principal benefit to growers is the over-all improvement in market prices expected to be obtained by disposal of the surplus.

Certain factors are required to be considered before undertaking such assistance. These factors are: (1) The supply of the commodity in relation to the demand therefor, (2) The price levels at which other commodities are being supported, (3) The availability of funds, (4) The perishability of the commodity, (5) The importance of the commodity to agriculture and the national economy, (6) The ability to dispose of stocks acquired through a price support operation, (7) The need to offsetting temporary losses of export markets, and (8) The ability and willingness of producers to keep supplies in line with demands. In the case of fresh vegetables, Section 32 operations generally may be carried out only in areas where extent of plantings is in substantial compliance with the Department's Acreage-Marketing Guides. These guides are issued seasonally as an aid to growers

in the preparation of their production and marketing plans. Also, for both fruits and vegetables a substantial portion of the crop must remain to be harvested. Surplus removal operations are not undertaken to clean up tag-end supplies. Other factors may require consideration according to the specific situation. From the long range point of view, however, these price-assistance and surplus removal activities work to encourage the industry to solve its own price-supply problems and should minimize the possible tendency for subsequent crops to be planted with government price assistance primarily in mind.

MARKETING RESEARCH DIVISION --- H. C. Trelogan, Director

The Agricultural Marketing Service administers or participates in the administration of broad agricultural marketing research and development programs. These are aimed at increasing the efficiency with which agricultural products are taken in the raw state from the farm and placed in the hands of consumers in the forms, at the times, and in the places desired by consumers. Research methods are applied to the solution of marketing problems such as improving quality, reducing costs, and expanding outlets for agricultural products. This involves research on the assembly, transportation, storage, handling, packaging, distribution, and pricing of farm products, and the structure, financing, and organization of domestic markets. There are four branches in the Marketing Research Division.

The Market Development Branch, R. M. Walsh, Chief, conducts marketing research relating to new and expanded market outlets for agricultural products. It emphasizes market potentials, economic aspects of expanded outlets for new or established products, economic feasibility of waste disposal and byproduct utilization, consumer preferences, new market outlets through distribution programs, and methods and practices to improve the merchandising of agricultural products. The activities of the Branch are conducted through four Sections -- Market Surveys, Product Development, Merchandising Methods, and Distribution Programs Research.

The Biological Sciences Branch, W. T. Pentzer, Chief, conducts marketing research relating to the measurement, protection, and improvement of quality of agricultural products as they pass through the marketing system. Its emphasis is on physiological, biochemical, pathological, and entomological problems, and on the physical and biological evaluation of quality factors. The work of the Branch is aimed at reducing marketing costs through improved quality and acceptability of farm products and reduction of waste and spoilage. This work includes improving storage methods, developing new devices and methods for determining product quality, and appraising the adequacy of grades and standards. The activities of the Branch are conducted through three Sections -- Quality Maintenance and Improvement, Quality Evaluation and Stored-Product Insects.

The Transportation and Facilities Branch, W. C. Crow, Chief, conducts marketing research with emphasis on economic and engineering research relating to transportation, wholesaling and retailing, handling and facilities, and market facility planning. The work is directed toward improving methods, equipment, and facilities for transporting, handling, storing and distributing farm and food products in order to increase the efficiency of marketing. The activities of the Branch are conducted through four Sections -- Marketing Facility Planning, Transportation, Wholesaling and Retailing, and Handling and Facilities Research.

The Market Organization and Costs Branch, D. B. DeLoach, Chief, conducts marketing research with emphasis on economic and cost analysis studies. Its work relates to the marketing of specific agricultural commodities, the organization, structure, and practices of commodity markets, and informational, statistical, and other services needed for the management of market firms. The Branch develops facts relating to marketing practices, channels, and organizations and their impact on costs; regularly measures the changes in farm-to-retail price spreads on food and fibers; and analyzes marketing costs and relates the cost of service to the service rendered. It compares costs and develops standards of efficiency to aid farmers and marketing agencies in reducing marketing costs and in improving services and effecting economies in the use of resources. The activities of the Branch are conducted through nine Sections -- Dairy Fruit and Vegetables, Livestock, Fibers, Special Crops, Poultry, Market Structure and Practices, Marketing Information and Statistics, and Grains and Feeds.

FES-76

UNITED STATES DEPARTMENT OF AGRICULTURE
FEDERAL EXTENSION SERVICE
Washington 25, D. C.

Date

Gentlemen:

Enclosed is purchase order No. dated
from the for Item
envelopes.

It is requested that these envelopes be manufactured in accordance with the contract specifications, printed as per the enclosed printing sample, and shipped as checked below to the

By prepaid transportation on commercial bill of lading ()
By freight, collect, on commercial bill of lading ()
By prepaid transportation with transportation charges billed as a separate item on invoice ()

Please follow other instructions indicated on the purchase order and acknowledge receipt and acceptance of this order.

Very truly yours,

F. W. Smith

F. W. Smith, Chief
Administrative Services Branch

Enclosures

United States Department of Agriculture
Agricultural Marketing Service
Agricultural Economics Division
Washington, D. C.

COTTON AND MANMADE FIBERS

Prepared for the 33rd National Outlook Conference
from November 28 to December 1, 1955

Cotton has been faced with competition from manmade fibers for many years. Indeed in tires, which in the past were the largest single use for cotton, cotton has virtually lost the market to manmade fibers. In 1939 tires used about 610 thousand bales of botton. Since the end of World War II manmade fibers have been displacing cotton and in 1955 the amount of cotton used in tires is so small that the Bureau of the Census is not even reporting the amount separately. In 1954, rayon equivalent to almost 1 million bales of cotton was used in the manufacture of tires.

Cotton has been meeting competition from manmade fibers in other fields too. Although the consumption of all textile fibers in the U. S. increased almost 10 pounds, from an annual average of about 31.5 pounds per person in 1935-39 to an average of about 41.6 pounds in 1950-54, average cotton consumption per person in 1950-54 of 28.8 pounds was only 3.3 pounds above the 1935-39 average. Manmade fiber consumption was up about 6.9 pounds. In other words, most of the increased fiber consumption between the two periods was taken up by larger manmade fiber consumption.

One measure of the over all effect of synthetic fiber consumption on cotton consumption shows that with each 1 percent increase in manmade fiber consumption, other factors being constant, cotton consumption tends to decline about 0.1 percent. At the consumption levels of the recent past, this means that a 1 pound increase in manmade fiber consumption per person would have caused about a fourth of a pound decrease in cotton consumption.

The substitution factor varies from use to use. In general, as indicated by the tire illustration above, cotton has been losing ground to synthetic fibers in the industrial uses, but has been gaining some ground in the apparel and household fields during the past few years, as shown below.

Table 1.- Cotton and manmade fibers: Consumption by use category. 1/

Year	National Cotton Council of America	E. I. du Pont de Nemours Company, Inc.	
	Cotton	Cotton	Manmade
	Million pounds	Million pounds	Million pounds
	Apparel		
1950	1,492	1,517	527
1951	1,438	1,465	548
1952	1,539	1,512	557
1953	1,635	1,621	525
1954	1,575	2/	2/
	Household		
1950	1,269	1,124	128
1951	1,243	1,058	148
1952	1,267	1,192	180
1953	1,325	1,248	187
1954	1,304	2/	2/
	Industrial		
1950	1,285	1,042	346
1951	1,248	1,057	399
1952	1,047	887	517
1953	928	779	596
1954	871	2/	2/
	Other consumer type products		
	3/	411	140
	3/	374	129
	3/	323	145
	3/	362	152
	3/	2/	2/

1/ Data from the National Cotton Council of America (as published in "Cotton Counts Its Customers") and E. I. du Pont de Nemours Co., Inc. (as published in the "Textile Organon," June 1955 supplement) differ because of differences in concept and classification.

2/ Not available.

3/ This classification was not used by the National Cotton Council.

According to the Dupont Co., use of cotton in the apparel and household fields increased by more than 100 million pounds in each category from 1950 to 1953. However, manmade fibers showed no increase in apparel and about half cotton's increase in household uses over the same period. In the industrial category cotton lost markets for 263 million pounds from 1950 to 1953, but manmade fibers gained 250 million pounds. Since it takes less than 1 pound of manmade fibers to substitute for 1 pound of cotton (1 for more than 2 in some uses for some manmade fibers), the manmade fiber gain in the industrial category probably completely replaced the cotton loss and accounted for some gain in the industrial fiber market.

Prior to the early 1940's, the only manmade fibers which were produced in significant amounts were rayon and acetate. All during the 1920's and 1930's rayon was higher in price than was cotton. However, since 1943 rayon staple fiber and rayon yarn has generally been lower in price than cotton and cotton yarn. For example, after adjusting for differences in spinning waste, the average price for Middling 15/16 inch cotton was about 116 percent of the price for rayon staple fiber in the 1954-55 cotton marketing year. The prices for better qualities of cotton which are used in larger quantities than Middling 15/16 inch in goods which competes with rayon fabrics were even higher in relation to rayon.

Plans for the future indicate that the segments of manmade fiber industry which are expanding over the next 2 years are the non-cellulosic fiber and the rayon staple fiber segments. About 312 million pounds of rayon staple fiber was produced in 1954; in the current year producing capacity is approximately 380 million pounds and in 1956 it will be about 575 million pounds.

In 1954 the U. S. produced about 346 million pounds of non-cellulosic manmade fibers. In 1955 producing capacity is approximately 526 million pounds and in 1956 capacity will be about 585 million pounds.

The non-cellulosic fibers usually are not considered to be very competitive with cotton. However, there are indications that they may be more competitive than appears on the surface. It is true that pound for pound the non-cellulosic manmade fibers are much more expensive than cotton. For example, 140 denier, filament yarn nylon sold for about $1.85 per pound and 150 denier, filament yarn Dacron sold for about $2.25 a pound in July 1955. These prices compare with about 71.3 cents for carded, knitting, single, number 30, cotton yarn. However, it takes less than 1 pound of most of the non-cellulosic synthetic fibers to replace two pounds of cotton yarn and there is no spinning waste in using the filament yarn made from non-cellulosic fibers. If the prices shown above are adjusted for utility and waste differences, the prices which are comparable to the 71.3 cents for cotton yarn drop to about 88 cents for nylon and $1.08 cents for Dacron. If the prices for the non-cellulosics follow the early history of rayon prices and decline over the next several years, cotton may be competing with these fibers on a price basis.

One might think that the price of fiber has little to do with use because the fiber makes up such a small part of the price paid by the ultimate consumer. For example, in 1952 the farmer's share of the consumers expenditure for cotton apparel and household items was about 14 percent. However, cotton products go through many processing steps from the farm to the consumer. The initial processing takes place at the spinning mill or in most cases the spinning and weaving mill. The product which weaving mills sell is called gray goods. Cotton accounts for more than 50 percent of the cost of gray goods. Thus the raw fiber is an important part of the cost of manufacturing gray goods. Relatively small variations in fiber price affect the profits of gray goods manufacturers. If gray goods manufacturers can increase profits by substituting one fiber for another, they will do so even though the cost of a finished item, such as a woman's dress, after the finishing, cutting, wholesaling, and retailing only reflects changes in the cost of the raw fiber to a small extent. Of course the gray goods manufacturer can substitute one fiber for another only as long as the consumer of the end product will accept the substitution. Consumer acceptance, therefore, slows up and may prevent substitution of some fibers for others. However, consumer preference is continuously being altered by promotional campaigns aimed at the consumer and by consumer experience with products made from various fibers.

For Administrative Use -
School Lunch and Direct Distribution Programs

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Food Distribution Division

November 1955

CANNED PORK LUNCHEON MEAT

The canned pork luncheon meat now being offered to school lunch programs and other eligible outlets by the U. S. Department of Agriculture is fully cooked and ready to eat. The pork cuts used in the luncheon meat are standard commercially cut and trimmed skinned shoulders, skinned hams and regular loins--used individually or in any combination. The meat was ground, seasoned, and mildly cured before canning. Each can contains 6 pounds of meat with natural juices. The cans are packed 9 to the case.

Storage: Store in cool, dry place.

Uses: The pork luncheon meat may be sliced and served hot or cold in sandwiches, or in casseroles and other main dishes.

Quantity to Prepare: Open only the number of cans needed for one day's use. Avoid leftovers. Allow approximately 2-1/8 cans (12 lbs.12 oz.) of the pork luncheon meat for 100 2-ounce servings.

Agriculture-Washington

For Administrative Use -
School Lunch and Direct Distribution Programs

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Food Distribution Division

November 1955

LARD (STABILIZED)

The lard now being offered to school lunch programs and other eligible outlets by the U. S. Department of Agriculture has been prepared from fresh, clean, sound fatty tissue from hogs in accordance with good commercial practice. Antioxidants have been added to prolong its keeping quality. It is packed in 3-pound hermetically sealed cans, 12 to each shipping case, and in 50-pound cans with slip-on lids, cased individually.

Storage: Store tightly covered cans of lard in a cool, dry place.

Uses: Lard is a good source of food energy. Like other fats, lard gives a "staying quality" to a meal. Its most important use is as a shortening in batters and doughs, such as biscuits, bread, cake, and pastry. It is used also for pan frying and for deep fat frying of poultry, fritters, croquettes, and some vegetables.

Agriculture-Washington

A PARTIAL LIST OF PUBLICATIONS PERTAINING TO THE LIVESTOCK SITUATION

5202

AGRICULTURAL MARKETING SERVICE

(Copies of material available from Marketing Information Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington 25, D.C., or Mrs. Y. Thomas, Room 3030-S, Extension 5223.)

Charting the Seasonal Market for Meat Animals--Agriculture Handbook No. 83, Harold F. Breimyer and Charlotte A. Kause.

Livestock Market News Statistics and Related Data--Statistical Bulletin No. 162.

This 62-page booklet, published in June 1955, bring livestock, meat, and wool statistics up to date through calendar year 1954. Prepared by Livestock Division, AMS.

"100 Million Cattle?"

A review of Projections and Methods of Making Them--Harold F. Breimyer, USDA, AMS, Processed 1954.

Outlook and Marketing Information on Livestock: How Extension Workers and Others May Use and Apply It--Harold F. Breimyer, USDA, AMS, processed 1955.

Regional Trends in Livestock Numbers--Earl E. Miller, USDA, AMS, Statistical Bulletin 146.

Statistical Analyses Relating to the Feed-Livestock Economy--Richard J. Foote, Tech. Bul. 1070, 1953.

The Analysis of Demand for Farm Products--Karl A. Fox, USDA, AMS, Tech. Bul. 1081, 1953. (Contains many data on livestock.)

Prepared for the 33rd Annual Agricultural Outlook Conference, Nov. 28 - Dec. 1, 1955, Washington, D.C.

AGRICULTURAL RESEARCH SERVICE

(Copies of material available from Information Division, Agricultural Research Service, U.S. Department of Agriculture, Washington 25, D.C., or Mrs. M. Smoot, Room 1670-S, Extension 4704.)

Animal Units of Livestock Fed Annually 1909 to 1954, ARS 43-10, USDA, June 1955.

Three sets of animal units are computed by States: Grain-consuming livestock, roughage-consuming livestock, and grain- and roughage-consuming livestock.

Beef, Facts for Consumer Education--AIB 84.
Pork, Facts for Consumer Education--AIB 109.

Source books designed primarily for consumer information programs, including information on meat consumption, grades, selection, and nutritive value.

Food Consumption of Urban Families in the United States... With an Appraisal of Methods of Analysis--AIB-132.
Price $1.00 from Superintendent of Documents.

Presents material from the 1948-49 urban food consumption studies, including tables released soon after the surveys were completed; and a discussion of problems that confront the analyst of family consumption data and results attained with various approaches.

Labor Used for Livestock--Statistical Bulletin 161, USDA, May 1955.

This publication contains tables which show the average number of man-hours used in caring for various classes of livestock by States in 1950.

FOREIGN AGRICULTURAL SERVICE

(Copies of material available from Information Service Branch, Foreign Agricultural Service, U.S. Department of Agriculture, Washington 25, D.C. or Room 5918-S, Extension 3160.)

Export Possibilities for U.S. Meat Products--FLM 14-55, October 3, 1955.

Hog Slaughter in Specified Countries--FLM 15-55, October 12, 1955.

International Meat Trade--FLM 12-55, August 29, 1955

U. S. Export Meat and Meat Products, September 15, 1955

Foreign Agricultural Service (Cont'd)

U.S. Foreign Trade in Cattle and Calves, Sheep and Lambs and Hogs--FIM 8-55, July 1, 1955.

U.S. Foreign Trade in Meat--FLM 9-55, July 5, 1955.

World Cattle Numbers--FLM 4-55, May 9, 1955.

World Consumption Trends in Meat--FLM 13-55, August 31, 1955.

World Hog Numbers--FLM 1-55, May 5, 1955.

World Meat Production--FLM 7-55, June 9, 1955.

World Sheep Numbers--FLM 5-55, May 31, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE
COMMODITY STABILIZATION SERVICE
Grain Division

SEED PATTERNS AND PROBLEMS

The seed industry is confronted with several serious problems having to do with both supply and demand. Until these problems are solved there are likely to be severe maladjustments for both producer and consumer. These problems are distinct and separate from those brought about by the vagaries of the weather.

The shift in production of alfalfa seed from the midwest and intermountain States is probably the most serious of the problems for the producers. Formerly most of the alfalfa seed was produced in the eastern half of the alfalfa country where yields averaged about 90 pounds per acre. Today California is producing more seed than the entire country did 15 years ago and the average yield per acre in recent years for that State exceeds 400 pounds. In spite of this tremendous increase in production in the Pacific Coast States the midwest and intermountain States continue to produce. This ruinous competition is likely to continue until very low prices force one area or the other out of business. As of October 15, 1955, producers were receiving the lowest prices in 15 years for their alfalfa seed. In the meantime, consumers of alfalfa seed will enjoy the lowest prices in many years.

The producers of alfalfa seed are not the only ones who will suffer from overproduction. Alfalfa competes with red clover in many consuming areas and the low prices of the former will take the market away from the latter. This coupled with not too good a supply of red clover seed may mean that consumption of red clover seed in the current crop year will be several million pounds lower than last year. Conversely, it is quite likely that the domestic disappearance of alfalfa seed during the 1955-56 season will surpass the 1954-55 record amount by several millions of pounds.

Alsike clover seed producers have been suffering for several years from the competition of Ladino clover. The domestic disappearance of alsike has shown a steady decline whereas that of most other legumes had increased. Just how long this trend will continue cannot be determined, but the current low prices of Ladino clover seed could speed up the decline.

The consumer of seeds may be enjoying the low level of seed prices but such a situation is usually of short duration because the seed producer turns rather quickly to more remunerative farm enterprises. This might be called adjusting to the economic conditions. It also means that the

supply will likely be so severely curtailed that seed prices will be almost prohibitive within 2 or 3 years. This is a common situation within the seed industry and it does not benefit the producer or the consumer in the long run. Their success as farmers depends upon a well-developed pattern of production which is adapted to their land, labor and equipment. Frequent changes seldom permit of maintaining such a pattern.

Another problem, one that is related to the accomplishments of experiment stations and the activities of the extension services, is the balancing of supply of improved varieties of seed to demand. Seed producers need to be advised of the demand for the different kinds and varieties of seed - domestic disappearance is the yardstick for measuring. With this information seed producers may study in advance the trends in the use of the several varieties of seed which they can produce. In this way the farmers may produce the varieties and kinds that consumers prefer in the quantities needed. The production pattern should be geared to the consumers' use and needs. Otherwise it would be a typical case of the tail wagging the dog, and such a course is certain to lead to disappointing results. The traditional plan where farmers produce as much of the kinds of seed which they can produce in the largest quantity is certain to run into price and marketing difficulties sooner or later in a free economy. There are classical examples of this happening repeatedly every year. The best examples of over-production this year resulting in disastrous growers' prices are sudangrass, common ryegrass, and alfalfa seeds.

Let us examine the alfalfa picture for a moment. Although use of alfalfa seed has been increasing since World War II, the production has been threatening to outstrip disappearance. Exports in recent years delayed the inevitable results of the supply far exceeding the demand. Immediately before and during World War II, around 70 million pounds of alfalfa seed were used annually in the United States. Use last year was more than double that amount. Incidentally, the larger use of alfalfa seed has decreased the use of red clover and alsike clover seeds. Factors which contribute to this larger use of alfalfa seed may be summed up as follows: Acreage controls applicable to the larger basic crops have made more acres available for other crops, such as grasses and legumes for hay and pasture. It is a well established practice in many areas to include grasses and legumes in the normal crop rotation. Drought-resistant types of alfalfas which produce more hay, silage, and pasture than other legumes had been developed and were ready to take advantage of the situation. Another factor in this over-all picture not to be overlooked is the shorter time that pastures are allowed to stand since they are in the rotation. The periods have been shortened as much as one-half in some areas. Another factor which has affected the amount of alfalfa seed used each year is the use of some types of alfalfa for green manure in place of other legumes, such as sweetclover. These over-all changes, together with the use of lime, phosphate, and trace elements on soils deficient in these elements have brought about a greater use of alfalfa seed in recent years.

This increased use was a healthy situation for seed producers so long as the larger demand for alfalfa seed remained ahead of the supply. It appears that the domestic supply has at last far outstripped the need for such seed, and that producers are faced with an over-supply for some time at prices that may not meet the cost of production.

This kind of situation is not confined to alfalfa seed alone. Neither is it limited to any one year's production. It has happened repeatedly and will continue to be a production and marketing problem until the production pattern is geared to the consumer's use and needs.

Farmer-producers and farmer-consumers are critically affected by the feast or famine situation. There is need to continue to strive through accurate information and other devices to bring a greater degree of stability in the production of important seed supplies. Wide fluctuations in supplies and prices affect not only the grower, but also the kinds and amounts of seedings which in turn may mean the difference between wise rotation practices and good sod cover as contrasted with poor rotations and excessive soil losses from erosion and depletion.

Prepared for 1956 Outlook Conference
November 28 through December 1, 1955
Agriculture - Washington

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Foreign Agricultural Service
Grain and Feed Division

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POSITION OF THE UNITED STATES IN WORLD WHEAT PRODUCTION AND TRADE 1/

The United States and Soviet Russia are the world's largest wheat producers, each producing about one billion bushels or more annually. There was a significant increase in Russia's acreage this year. The third largest producing country is China with a 1945-49 average of 864 million bushels. Canada is in fourth place with a postwar average of 366 million bushels, although she has produced much more than that amount in four of the past five seasons. Trends in acreage, yield and production in the principal areas of the world are summarized in the following table, and additional information regarding individual countries is contained in the enclosed report on world breadgrain production.

An analysis of these data indicates that acreage in Western Europe in 1955 was slightly lower than the prewar average (1935-39), but that yields per acre in most of these countries are considerably higher, resulting in production being approximately 200 million bushels more in 1955 than it was before the war. Acreage in Asia has increased appreciably and yields in a number of countries of that Continent also are higher. The principal increases in acreage in Asia have occurred in Turkey and China. Both India and Pakistan have increased acreage a little more than one million acres. India's yield in 1955 was 11.9 bushels, compared with 10.3 before the war. Argentina and Australia in the Southern Hemisphere had somewhat smaller acreages in recent years than before the war, but yields have been higher. Thus for the world as a whole, wheat production has increased from 6,085 million bushels in 1935-39 to an estimated 7,310 million bushels in 1955, reflecting larger acreage and higher yields per acre.

1/ Prepared for the 1956 Agricultural Outlook Conference held in Washington, D.C., November 28-December 1, 1955.

Agriculture - Washington

WHEAT: Acreage, yield, and production summary

Country	Acreage			Yield per acre			Production		
	1935-39	1945-49	1955 1/	1935-39	1945-49	1955 1/	1935-39	1945-49	1955 1/
	1,000 acres	1,000 acres	1,000 acres	Bushels	Bushels	Bushels	1,000 bushels	1,000 bushels	1,000 bushels
United States	57,293	71,024	47,376	13.2	16.9	19.3	758,629	1,202,396	915,528
Canada	25,595	24,717	21,504	12.2	14.8	23.0	312,399	362,774	494,090
Argentina	15,834	11,432	-	14.0	16.9	-	221,769	193,740	-
Australia	13,128	12,662	10,610	12.9	14.0	18.8	169,744	177,742	200,000
France	12,560	10,354	11,300	22.8	23.0	33.2	286,505	238,200	375,000
Turkey	8,973	9,436	16,300	15.1	13.3	13.8	135,690	125,089	225,000
Western Europe	53,500	47,590	52,170	21.2	19.9	25.5	1,136,000	947,000	1,330,000
India	25,460	23,312	26,842	10.3	9.1	11.9	262,100	212,336	318,800
Japan	1,735	1,655	1,639	28.8	20.7	32.9	49,954	34,325	54,000
Soviet Union	104,000	82,200	-	11.9	10.8	-	1,240,000	885,000	-
China	49,000	54,447	-	15.3	15.9	-	750,000	864,280	-
Estimated world total	424,900	406,030	473,470	14.3	14.5	15.4	6,085,000	5,900,000	7,310,000

1/ Preliminary estimates.

From official and unofficial sources.

World Trade:

The United States has been a net exporter of wheat in all but five years since the adoption of the Constitution. The only years when we have been a net importer were 1837, 1934, 35 and 36, and 1943. Small net imports in the 1930's were due to extremely short crops, and net imports in the 1943 marketing season were due to large imports of feed wheat from Canada.

From 1790 until the close of World War I, the United States was a debtor nation, having borrowed from European capitalists for economic development of our country. Exports of wheat and other commodities were used to pay off these loans. At the end of World War I, we had our first experience with the accumulation of agricultural surpluses, including wheat. At that time we had become a creditor nation, and other countries were short of dollar exchange with which to buy wheat. For a number of years private and public capital was loaned to European countries, and so during the latter part of the decade of the 1920's our wheat exports were sufficient to prevent accumulation of surpluses. When we ceased making such loans, our exports fell off and remained low for the decade of the 1930's. By that time we had again accumulated a substantial surplus of wheat which was used during World War II as feed for livestock.

At the close of World War II in 1945, the world was short of wheat, and it was also short of dollars. To meet this situation, the United States provided aid in various forms, including large shipments of wheat to our defeated enemies in Japan, Germany, and Italy, as well as to our allies. Our wheat exports, financed almost entirely by the United States Government, reached an all-time high.

With increased production in importing countries and reduced amounts of U.S. aid abroad, our exports declined from 475 million bushels in 1951-52 to 217 million bushels in 1953-54. During the last two years there has also been a decline in domestic utilization of wheat because smaller quantities have been used for seed and livestock feed. This combination of reduced exports and reduced domestic utilization, together with continued high yields per acre, has resulted in U.S. carry-over stocks reaching an all-time high level.

This brief review of our world trade in wheat indicates that the accumulation of surpluses in this country have been associated with declining exports. The surplus which accumulated at the end of the 1920's was reduced by four successive years of crop failure, 1933-36, and the surplus which accumulated at the end of the 1930's was utilized during World War II for livestock feeding purposes. It is not clear at the present time just what will reduce our present stocks of wheat, but the amount of wheat which we are now exporting (274 million bushels in 1954-55 and an estimated amount at about this level in 1955-56) is not sufficient to make any substantial reduction in the carry-over in view of reduced domestic disappearance.

The following table shows exports from the U.S. and other countries by 10-year periods, beginning with 1900-09, and by individual years since 1945. It will be noted that the U.S. furnished an average of 26 to 27 percent of the world trade from 1900 through 1929, 10.6 percent for the period 1930-39, and 42.1 percent during 1945-53. Last season we supplied about 29 percent of the world's exports and may maintain about this proportion in 1955.56.

Wheat and flour: World exports, by principal countries, averages 1900-53, annual 1945-54

Year beginning July 1	United States 1/		Canada 2/		Australia		Argentina		Eastern Europe 3/		Other		Total
	Quantity	Percentage of total	Quantity	Percentage of total	Quantity	Percentage of total	Quantity	Percentage of total	Quantity	Percentage of total	Quantity	Percentage of total	
	Mil. bu.	Pct.	Mil. bu.	Pct.	Mil. bu.	Pct.	Mil. bu.	Pct.	Mil. bu.	Pct.	Mil. bu.	Pct.	Mil. bu.
Average:													
1900-09 4/	155	26.0	38	6.4	26	4.4	84	14.1	231	38.7	62	10.4	596
1910-19 4/	183	27.5	128	19.2	55	8.3	89	13.4	130	19.6	80	12.0	665
1920-29 4/	222	26.4	267	31.8	89	10.5	154	18.4	40	4.8	68	8.1	840
1930-39 4/	75	10.6	201	28.3	114	16.1	130	18.3	89	12.5	101	14.2	710
1945-53	384	42.1	279	30.6	90	9.9	72	7.9	36	3.9	51	5.6	912
1945	391	45.7	361	42.1	36	4.2	68	7.9	--	--	1	0.1	857
1946	397	52.4	232	30.6	47	6.2	60	7.9	6	0.8	16	2.1	758
1947	486	51.8	209	22.2	96	10.2	102	10.9	40	4.3	6	6	939
1948	504	51.1	222	22.5	122	12.4	61	6.2	53	5.4	24	2.4	986
1949	299	36.2	236	28.6	144	13.8	88	10.7	54	6.6	34	4.1	825
1950	366	39.0	221	23.6	127	13.6	103	11.0	37	3.9	84	8.9	938
1951	475	44.6	347	32.6	99	9.3	30	2.8	54	5.1	61	5.6	1,066
1952	318	32.2	392	39.7	99	10.0	29	3.0	48	4.9	101	10.2	987
1953	217	24.7	288	32.7	71	8.1	110	12.5	45	5.1	148	16.8	879
1954	274	29.0	253	26.8	94	10.0	131	13.9	5/	--	5/191	20.3	943

1/ Excludes the wheat equivalent of exports of flour milled in bond. Includes principal products other than flour.
2/ Includes exports of "wheat unfit for human consumption" from Canada to U.S. as follows: 1950-51, 12 million bushels; 1951-52, 30 million bushels; 1952-53, 20 mil. bu; 1953-54, 4 mil. bu; and 1954-55, 3 mil. bu. Also includes wheat exported to the United States for milling in bond and later exported by the U.S.
3/ Includes U.S.S.R.
4/ Calendar years.
5/ Eastern Europe combined with "other."

The world wheat trade, as a whole, remains fairly high in terms of historical averages, but the situation has been complicated by the emergence of France, Turkey and several other countries as exporters of wheat, in addition to Canada, Australia, Argentina, the Danube Basin and North Africa. Thus, there is now extreme competition among exporters for sales on the world market.

Despite the large 1955 world wheat crop and high-level supplies in many of the importing countries, world trade in July and August 1955 exceeded that of 1954. In September and October this year, exports from the Big 4 (Canada, United States, Argentina and Australia) fell off to some extent but France, Turkey, and others have been active exporters during this period. Taking all factors into consideration, it is believed that world wheat trade in 1955-56 may be equal to the 943 million bushels of 1954-55. The higher economic activity and increased purchasing power in many of the importing areas should result in maintaining relatively large exports. If the world total reaches this level, the U.S. should be able, by making full use of existing export programs, to export about 275 million bushels this season.

Measures to Facilitate Exports from the United States:

As indicated above, U.S. exports since 1945 have been made possible to a large degree by special programs of the U.S. Government. These programs have included shipments to Japan and Germany at the time of military occupation, donations under UNRRA, economic aid (grants and loans) under the Marshall Plan, ECA, MSA, FOA, and the present agency known as the International Cooperation Administration (ICA). There have also been special relief shipments such as those to India in 1952-53, Pakistan in 1953-54, and to a number of countries in the past year under Title II of P.L. 480.

Wheat is also being exported under barter transactions. Under the provisions of the CCC Charter Act, as amended, and Title III, P.L. 480, CCC-owned agricultural commodities may be exchanged for strategic materials, or other materials, goods, or equipment required by U.S. agencies. During the past year, 1954-55, about 46 million bushels of wheat were exported under this barter program.

During the past year, there also have been agreements with a number of countries under Title I of P.L. 480 whereby the U.S. sold wheat for local currencies. This program was started in the fall of 1954, and by June 30, 1955, about 22 million bushels of wheat had been shipped under this legislation. Additional quantities have been negotiated and shipments under Title I of P.L. 480 in 1955-56 will be considerably larger than they were in 1954-55. Largely as the result of these special government-sponsored programs our exports increased from 217 million bushels in 1953-54 to 274 million bushels in 1954-55.

During the postwar period, prices of wheat in export trade have been declining, and prices to farmers in the U.S. generally have been held above the levels at which other exporters were selling. It has been necessary, therefore, for the U.S. to provide export subsidies in order to meet price competition on the world market. These subsidies were first authorized under the International Wheat Agreement, which became effective August 1, 1949, and the amount of the subsidy since that time has averaged over 60 cents per bushel.

Beginning in November 1953, the CCC has offered wheat for sale outside the Agreement at the IWA price. This action was necessary in order to meet competition of other exporting countries which also were selling to importing countries outside of the Agreement.

It is a significant feature of the world wheat trade of recent years that, in addition to special programs and economic aid, it has been necessary for the U.S. also to offer wheat at competitive prices in order to make sales on the world market.

Limitations on Expansion of U.S. Exports:

One important factor which limits opportunities of all exporters to expand their trade in wheat, is the fact that most importing countries of the world maintain prices to their growers above the levels at which wheat is being sold by the exporters in efforts to more nearly attain self-sufficiency in the production of food crops. Importing countries generally are faced with currency exchange difficulties and the necessity of stimulating production at home. It is possible that with continued availability of wheat from overseas at reduced prices, some of these countries may eventually change their domestic production programs and come to depend more on overseas supplies. If such changes should occur in the production programs of importing countries, world trade in wheat would increase, but there is little evidence as yet that many significant changes of this nature are contemplated in the near future. Another factor tending to limit world exports of wheat is the relatively inelastic demand for wheat, with the increased world consumption generally reflecting only population increases rather than higher per capita rates. The above factors, together with the large supplies on hand in many of the importing countries results in a tendency to "hold back" on purchases when world supplies are abundant and when prices are showing signs of declining, and this makes it unlikely that there will be any appreciable increase in world exports this season. Also, it will be exceedingly difficult for the U.S. to obtain more than 30 percent of the total world trade in view of the tendency toward "soft currency" and bilateral trading in wheat.

Quality Factors:

During the past several years, there has been much discussion concerning the quality of U.S. wheat offered in the world market. Countries that were very glad to get any kind of wheat that was offered to them during the first few years after the war, have been in a better position to pick and choose, as the situation shifted from a sellers' to a buyers' market. This situation has caused producers, plant breeders and cereal chemists in the U.S. to examine carefully the quality of wheat now being grown with an effort to make all possible improvements. At the same time, buyers have been willing to take substantial quantities of wheat from the U.S. when it was offered to them at competitive prices, with due regard to quality differentials. There is some indication that many buyers abroad still consider price as the principal factor in determining the kind of wheat they will purchase. Nevertheless, it is necessary that we pay due attention to the quality problem if we are to expand and maintain our place in the world wheat trade. Many buyers abroad during the past year have found that they can obtain satisfactory qualities from the U.S. if they will be more explicit in the specifications set forth in their

purchasing contracts. Steps are being taken by the USDA to acquaint buyers abroad with the kinds of wheat available from the U.S. and with our grading and marketing system. The following table shows U.S. exports by classes beginning with the 1945-46 marketing year. It will be noted that we export more Hard Red Winter than any other class of wheat and that we have also exported substantial quantities of Hard Red Spring, Soft Red Winter and White wheat. Durum was not available for export in 1953-54 and 1954-55 because of very small U.S. crops.

WHEAT: U. S. exports by classes, 1945 to date 1/

Year beginning July 1	Hard Red Winter	Soft Red Winter	Hard Red Spring	Durum	White	Total
	Million bushels					
1945	237	66	53	1	36	393
1946	271	31	39	4	56	401
1947	338	45	49	15	42	489
1948	352	42	59	4	50	507
1949	180	35	23	2	62	302
1950	199	30	49	10	81	369
1951	251	23	87	15	103	479
1952	184	40	17	3	77	321
1953	78	56	11	-	75	220
1954	123	62	28	-	64	277

1/ Includes shipments to U.S. territories.

Import Controls:

In 1941 the United States established import quotas on imports of wheat and flour. The annual quota on wheat is 800,000 bushels and the quota on flour is 4 million pounds. These quotas have remained in force every year since 1941 except during the war years of 1943 and 1944 when rather large shipments were made to the U.S. from Canada because of war conditions. The quotas are imposed under Section 22 of the Agricultural Adjustment Act. Imports of registered or certified wheat for seed and limited amounts of wheat for experimental purposes are permitted ex-quota. The import duty on wheat for milling is 21 cents per bushel, and the duty on flour is 52 cents per hundredweight.

Wheat unfit for human consumption may be brought in without limitation at a duty of 5 percent ad valorem, and in some years considerable quantities have been imported from Canada. The amounts imported in the last few years, however, have been relatively small and it has not been considered necessary to place limits on imports of this wheat.

The Tariff Act also provides for the importation of wheat, free of duty, for milling wheat in bond and export as flour. The amounts of our imports under various categories since 1939-40 are shown in the following table.

WHEAT AND FLOUR: Imports into the United States, 1939-54 1/

Year beginning July	For domestic use 2/				Wheat for milling in bond and export 2/	Total
	Full-duty wheat	Wheat for feed 3/	Flour 4/	Total wheat and flour		
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1939	56	86	335	477	9,953	10,430
1940	165	3,237	291	3,693	7,331	11,024
1941	1,700	1,785	179	3,664	11,912	15,576
1942	806	150	100	1,056	7,577	8,633
1943	5/ 136,013	189	157	136,359	10,952	147,311
1944	5/ 26,235	15,919	194	42,348	9,213	51,561
1945	1,136	767	97	2,000	11,591	13,591
1946	21	29	7	57	1,984	2,041
1947	7	117	6	130	19	149
1948	1,317	10	174	1,501	3,070	4,571
1949	1,003	1,097	119	2,219	9,621	11,840
1950	174	11,647	5	11,826	8,180	20,006
1951	1,475	29,921	109	31,505	5,907	37,412
1952	1,016	20,383	117	21,516	6,415	27,931
1953	999	4,300	135	5,434	3,089	8,523
1954	1,287	2,915	83	4,285	1,004	5,289

1/ Includes flour expressed in wheat equivalent. Exports of wheat products other than flour, not shown in the table, expressed in thousand bushels, wheat equivalent, beginning with 1941-42, were as follows: 326; 1,265; 2,347; 2,464; 2,213; 3,441; 7,095; 1,438; 649; 572; 535; 574; 530; and 738. 2/ As reported by the Department of Commerce. 3/ Classified as "unfit for human consumption" or imported for special feeding programs. 4/ Includes some flour imported free for export, which for 1939 was 214,000 bushels; 1940, 170,000 bushels; 1941, 2,000 bushels; 1942, 2,000 bushels; 1945, 19,000 bushels; 1948, 1,000 bushels; 1949, 29,000 bushels; and 1953, 2,000 bushels.

International Wheat Agreement:

This is the seventh crop year in which the International Wheat Agreement has been in operation. Under the provisions of IWA, importing countries are assured of designated quantities of wheat but are obligated to buy only at the IWA minimum ($1.55 per bushel basis No. 1 Manitoba Northern in store Fort William-Port Arthur.) Likewise, the exporting members are obligated to offer for export certain quantities but only at the IWA maximum of $2.05 per bushel. International trade during the past season has been between the maximum and minimum. As pointed out earlier, it has been necessary for the U.S. to subsidize wheat moving under the agreement.

WHEAT AND FLOUR: United States exports and subsidy payments under IWA 1949-50/1954-55

Year beginning August 1	Exports in wheat equivalent	Total payments	Average rate per bushel
	Bushels	Dollars	Cents
1949-50	162,724,041	89,763,201	55.2
1950-51	249,525,545	169,718,889	68.0
1951-52	255,523,772	167,310,583	65.5
1952-53	251,430,145	136,080,203	54.1
Total 1949 agreement	919,203,503	562,872,876	61.2
1953-54	106,413,887	49,709,502	46.7
1954-55	139,210,000	1/ 105,267,086	75.6
Total 1953 agreement (2 years)	245,623,887	154,976,588	63.1

1/ Includes an estimated $10,859,632 to be paid in 1955-56 fiscal year.

Source: I.W.A. Branch - Grain Division, CSS

Consideration is now being given to renewal of the International Wheat Agreement which otherwise would terminate on July 31, 1956.

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GOVERNMENTAL MARKETING SERVICES AND PROGRAMS FOR FRUITS AND VEGETABLES

This summary of governmental marketing services and programs is intended as a handy reference list of sources of information with a highly abbreviated description of each. If more detailed descriptions or information about particular services or programs are desired, communicate with the Agricultural Economic Programs Division, Federal Extension Service, or directly with the appropriate agency or division as indicated below.

Marketing Services

A AGRICULTURAL ESTIMATES DIVISION --- S. R Newell, Director

1. Fruit and Vegetable Statistics Branch --- Reginald Royston, Chief

The Crop Reporting Board of the Department of Agriculture provides the nation's basic statistics on crop and livestock production. In the field of fruits and vegetables, the principal types of information available by groups of commodities are:

(a) 5 Citrus Fruits, 17 Deciduous Fruits and 5 Tree Nuts - Monthly forecasts are issued of production and end-of-season estimates of production, farm disposition, utilization of sales, season-average price and value. Monthly prices for 4 citrus and 3 dediduous fruits also are provided.

(b) Irish Potatoes and Sweetpotatoes - Estimates are provided of intended, planted and harvested acreage, monthly forecasts of yield per acre and production, and end-of-season estimates of yield per acre, production, farm disposition, monthly and season-average prices and value. For Irish potatoes only, a January 1 stocks report is issued.

(c) 28 Principal Commercial Vegetables for Fresh Market - Monthly estimates by seasons (based on time of harvest) are published covering acreage for harvest, monthly forecasts of yield per acre and production, and end-of-season estimates of planted acreage, acreage for harvest, yield per acre and production, both available for sale and sold, season-average prices and value. Monthly prices are provided on a national basis only for 15 crops. December 1 and January 1 stocks of cabbage in New York State and January 1 stocks of onions in the storage-crop states are provided Annual estimates on a national basis only of the commercial production of all vegetables.

Prepared for the 33rd National Outlook Conference, Fruit and Vegetable Work Session, U. S. Department of Agriculture, Washington, D. C.

(d) Principal Vegetables for Commercial Processing - Estimates are made of intended, planted and harvested acreage, monthly forecasts of yield per acre and production, and end-of-season estimates of yield per acre, production, season-average price and value. For 3 crops, separate estimates are issued on a national basis of acreage, production, season-average price and value for freezing and for canning and other processing. For pickles, and October 1 stocks report is published.

The primary objective of the monthly crop reports is to give a timely picture of current and prospective supplies so growers and others can make intelligent decisions regarding production and marketing problems. The secondary objective, which is the principal reason for the annual crop summaries, is to compile similar information on a historic basis for the use of agricultural research workers and for comparison with the monthly forecasts.

2. Cold Storage Reports --- M R Banks, Head, Cold Storage Section

Information on national cold storage holdings of fresh and frozen fruits and vegetables is being made available upon request to the trade and other interested persons through a series of monthly market information reports. Warehouse stocks of various fruits and vegetables are reported periodically by the operators of public, private, and semiprivate storage facilities. Not included in this group are wholesaler, jobber, and other facilities used for holding products less than 30 days. The Cold Storage Reports are released at 2:00 p.m. (Washington time) on the 15th of each month.

B. AGRICULTURAL ECONOMICS DIVISION --- Frederick V. Waugh, Director

1. Statistical and Historical Research Branch --- James P. Cavin, Chief

The Fruit and Vegetable Situation Reports, published quarterly, present a comprehensive review and outlook statement for fruits and vegetables based on analyses of trends and current developments in fruit and vegetable data and other physical and economic factors. The reports are distributed to all interested persons. They are useful in interpreting changing conditions in marketing these commodities, for both professional agricultural workers and those engaged in the industry.

C. FRUIT AND VEGETABLE DIVISION --- S. R. Smith, Director

1. Market News Branch --- C. D. Schoolcraft, Chief

The Fruit and Vegetable Market News Service was established in 1915 and has operated since that time to provide the industry with current, unbiased information on supplies, movement, distribution, demand, prices, and other factors affecting the marketing of fruits and vegetables.

The Market News Service collects information while markets are being made and distributes this information as rapidly as modern communication facilities will permit. Market reports are disseminated by mail, leased wire, newspapers, radio, television, press associations, telephone, and personal contact.

The Fruit and Vegetable Market News Service now operates offices under the supervision of Federal reporters in 24 terminal market cities on a year-round basis and in 24 producing and shipping areas during the active harvesting and marketing season. Many of these offices are financed by Federal and State agencies under cooperative agreement. In addition, State offices operating under cooperative agreement issue fruit and vegetable reports in 15 markets or capital city offices and 8 shipping point offices. Cooperative agreements are in effect with 31 States and the Territory of Hawaii.

Terminal market reports include information on prices and conditions on the local wholesale market, together with data on rail and boat receipts, unloads and track holdings, and in some markets on truck receipts. This local information is supplemented by reports on carlot shipments, reports from important producing areas, and limited information from other terminal markets.

Shipping point reports usually cover a single commodity or group of commodities of interest in a local or regional producing area. These reports cover prices and conditions in the local area and competing producing areas, carlot and in some cases truck shipments, on some deals rail distribution information, and information as reported from various terminal markets in the general marketing area of the commodities covered.

Terminal market offices issue monthly and annual summaries on rail and boat unloads, and truck receipts where reported. Shipping point offices issue seasonal or annual summaries covering the marketing of specific commodities. The Washington office issues weekly and annual summaries covering shipments, annual summaries on unloads of major commodities in 100 U. S. and 5 Canadian cities, and annual summaries of f.o.b. prices and terminal market prices for New York and Chicago.

2. Fresh Product Standardization and Inspection Branch -- E. E. Conklin, Chief

The Fresh Products Standardization and Inspection Branch of the Fruit and Vegetable Division, AMS, is responsible for developing and keeping up-to-date by periodic revision the U. S. Standards for fresh products and the maintenance of an Inspection Service to inspect and certify upon request the grade, quality and condition of lots of produce for financially interested parties.

Since 1917, U. S. Standards have been issued for most of the fruits and vegetables and some special products including peanuts and important edible tree nuts. Three types of standards are maintained, namely, those used primarily in wholesale trading, those used as a basis for contract between

growers and processors for raw products for processing, and consumer standards used for packing and sale of produce in consumer-sized package at retail The U. S. Standards are permissive in character although in some instances they become compulsory through provisions of State laws or Federal Marketing Agreements and Orders. Owing to different uses and styles of products packed, several standards are often necessary for one product. At present the Department has issued 144 standards for 77 different products which includes 40 standards for 21 different fruits, 87 standards for 48 different vegetables and 17 standards for 8 products not classed as fruits and vegetables.

The Inspection Service of the Branch directs two lines of inspection activities, Market Inspection and Shipping Point Inspection. The over-all program is directed from the Washington office through three district supervisors their assistants and 34 area supervisors. The Service is virtually supported on a fee basis. Market inspection offices are located in 78 principal cities and inspection by Federal inspectors is available to applicants on lots of fresh fruits and vegetables at $10.00 per car for quality and condition or $8.00 per car for condition only. Transportation costs and other necessary expenses are added for inspections made in cities where inspection offices are not located. Shipping Point Inspection by Federal-State inspectors is available to applicants under existing cooperative agreements which agencies in the 48 States, Puerto Rico and Hawaii. In general, charges for Shipping Point Inspection range from about $6.00 to $12,00 per car depending on the State in which the inspection is made and the product inspected.

During the 1955 fiscal year the Inspection Service inspected 1,320,817 carlot equivalents of fresh products. Included in this total were 48,291 cars for tradesmen in receiving markets, 54,526 cars of supplies for public and private agencies, 724,574 cars for commercial shipment at shipping points, 457,104 cars of raw products for processing, and 36,322 cars of Farmer's Stock Peanuts.

3. Processed Product Standardization and Inspection Branch - F.L.Southerland, Chief

The Processed Products Standardization and Inspection Branch of the Fruit and Vegetable Division is concerned with two major service programs. One is developing and revising grade standards for processed fruits and vegetables and a host of miscellaneous processed foods and the other one is conducting and maintaining an inspection service to determine compliance with the grade standards, upon request of financially interested parties.

The objectives in developing and revising grade standards for processed foods are to assist processors in doing a better job in packing these foods by developing for them a uniform yardstick with which to measure important variations in the quality of the product; to aid them in selling their product, to aid buyers in selecting the grade or quality to best suit their particular customers; to facilitate trading between sellers and buyers; to aid bankers or others who make loans in arriving at fair loan values; to aid shippers,

public warehouses and public transportation companies in the settlement of damage claims and to improve the general over-all quality of processed fruits and vegetables with the view in mind of better satisfying consumers, which, in the end, benefits growers who make improvements in producing better fruits and vegetables for processing.

The standardization work is performed by a staff of food technologists in the Branch who have specialized in standardization work. Data for developing standards are obtained by examination of representative samples of the different qualities packed, which may include chemical and microscopic examinations of such samples, making personal contacts with individual processors, industry groups or industry association technical committees, distributors, Federal and State research and marketing specialists and other scientists, obtaining the views of field inspectors of the Branch and securing data from other sources which may be available and useful in the development of a standard. Based on the data obtained, the standards are drafted and discussed with the industry concerned before they are published in final form for use. In order to aid in more uniform interpretation of the standards, studies are made to evaluate objective tests and methods, including the development of models, photographs and permanent glass colors to illustrate the requirements of different quality factors and to eliminate the human element of judgment. The Branch has developed over the past 25 years 124 standards for processed foods.

The standardization program includes giving assistance in development of Federal Specifications which are used by the Military and civilian agencies including cities and States, for their use in making purchases of processed foods to suit their particular needs.

The inspection service is organized with headquarters in Washington, D. C. and three District Offices which are located in San Francisco, Chicago and New York City, respectively. The inspection service is staffed with approximately 400 well trained inspectors. Thirty-three inspection offices are established and are located in the major producing areas, including Hawaii and Puerto Rico, and in many of the large receiving markets.

Inspection is accomplished through one or more methods or procedures, depending upon the desires of the applicant for the service. These procedures consist of what is known as "Continuous Inspection," Plant Inspection Pack-Certification Service," "inspection of specific lots," and "inspection of unofficially submitted samples." The greatest volume of inspection work performed is accomplished by making inspection of specific lots located in warehouses and storages.

The extent of the use of the standards and the inspection service may be indicated by the number of requests for grade standards received each year from interested persons, which ranges from 30,000 to 60,000 copies per year. The inspection service inspected approximately 20 percent of the entire output of the canned fruits and vegetables last year and approximately 80 percent of the entire production of frozen fruits and vegetables.

4 Regulatory Branch --- J. J. Dimond, Chief

The Regulatory Branch of the Fruit and Vegetable Division is charged the enforcement of the Perishable Agricultural Commodities Act, the Standard Container Acts and the Export Apple and Pear Act

Most of the work of this Branch is devoted to complaint and license work in connection with the PACA.

The Perishable Agricultural Commodities Act requires commission merchants, dealers and brokers engaged in the business of handling fresh or frozen fruits and/or vegetables in interstate or foreign commerce to obtain a license.

The purpose of the Perishable Agricultural Commodities Act of 1930 is to suppress unfair and fraudulent practices in the marketing of fresh and frozen fruits and vegetables.

This Act was sponsored by fruit and vegetable shippers and buyers because rapid market price fluctuations in these perishable products tended to encourage rejections by buyers or failure to deliver by sellers under existing contracts without reasonable cause. Also, growers or shippers in many instances had no effective method of determining if incorrect accountings of sales were given by commission merchants or brokers located in distant markets.

Enforcement of the Act is obtained by requiring a license at an annual fee of $15.00 for all persons engaged in interstate or foreign commerce of these products. Violations of the provisions of the Act make a person subject to suspension or revocation of his license. The penalty for operating without a license is not more than $500 for each such offense, plus $25 for each day the offense continues. However, if the failure to obtain a license was not willful, the applicant is granted a license at the standard $15.00 fee plus arrearage at this annual rate for the period during which his operations were subject to license. The costs of administering the Act are paid from the fees collected and there are no appropriations made nor other charges assessed against a person who files a request for assistance or action under it.

Reparation complaints under this Act involve failure to pay, unjustified rejection, failure to render accurate accountings in connection with consigned lots, misrepresentation, etc. Disciplinary complaints usually involve misbranding, failure to maintain adequate records, operating without a license or after the operator's license has been suspended or revoked. Approximately 27,000 licenses were in effect on August 1, 1955, and during the 1955 fiscal year, more than 3,100 complaints were handled under this law.

Complaints are also handled under the Produce Agency Act, a criminal statute. Any product of a farm shipped on consignment in interstate commerce is covered by this Act. Under the Standard Container Act, a continual check is made

on the products of the manufacturers of various types of containers in order to determine that the containers comply with the specifications and requirements of the laws The Export Apple and Pear Act is designed to maintain the high quality and good reputation of U. S. produce destined for export.

The Regulatory Branch maintains field offices in New York, Chicago, Los Angeles, Fort Worth and Winter Haven, Florida.

D. FOREIGN AGRICULTURAL SERVICE - -- Gwynn Garrett, Administrator

1. Fruit and Vegetable Division --- D. M. Rubel

The Foreign Agricultural Service, U S. Department of Agriculture, including its Agricultural Attache staff aids those interested in the exports or imports of agricultural commodities and their products. This service includes such functions as the providing of information, facilitating interested parties in communicating with their counterparts in other counties, providing liaison functions for individuals, industry groups and governmental agencies in the conduct of their business or responsibilities and for the purpose of improving international trade in agricultural commodities.

International trade usually is much more complex than domestic trade because of such factors as differences in language, currency, exchange rates, economic conditions, traditional consumer preferences, bilateral and multilateral agreements and governmental policies. The Foreign Agricultural Service aids in meeting some of these problems and seeks to protect and aid domestic industries through available means. On the information side, in addition to direct communication, it publicizes through such media as Foreign Agricultural Trade, Foreign Crops and Markets and specialized reports, necessary general material of routine nature on a world-wide and localized basis. In meeting particular problems it aids industry groups in obtaining the benefits of "tools" available to them under approproate international agreements and legislation. Some of the latter include:

IMPORTS

Section 22 of the Agricultural Adjustment Act, as amended, provides that fees or quantitative limitations may be imposed whrn necessary to prevent imports from materially interfering with any program or operation of the Department. Action has been taken on limitation of imports of specified tree nuts when such imports were interfering with the successful operation of marketing agreement programs.

Section 336 of the Tariff Act of 1930, as amended, provides for import fees to eqealize differences between foreign and domestic costs of production, provides the commodity is not included in a trade agreement entered into under another section of the Tariff Act. Most fruits and vegetables are included in such agreements.

The so-called "escape clause" -- Section 7 of the Trade Agreement Extension Act of 1951, as amended, may offer a possibility for action. Under this Section, any interested party may apply to the Tariff Commission for an investigation to determine whether, as a result of a trade agreement concession, imports are entering the United States in such increased quantities either actual or relative, as to cause or threaten serious injury to the domestic industry. Action under this Section may either raise the duty or it may permit a tariff quota

In connection with a proposed Section 7 action, Section 8(a) of the same Act directs that a decision be made by the President within 25 days, if the Secretary of Agriculture determines that, due to the perishability of the commodity, a condition exist which requires emergency action.

Please note that any application under Section 7 whould be sent directly to the Tariff Commission. If, in addition, the emergency treatment provided by Section 8(a) is desired, a request for such action should be submitted in duplicate to the Secretary of Agriculture. This request should include a statement of the reasons why the commodity is perishable, and why, due to such perishability, a condition exists requiring emergency treatment, and shall be supported by appropriate information and data The latter should include a copy of the application to the Tariff Commission and of the data related to and shpporting that application.

EXPORTS

Public Law 480 -- The Agricultural Trade Development and Assistance Act of 1954, as amended, provides that 1.5 billion dollars may be used for the sale of surplus agricultural commodities for foreign currencies in friendly countries A program is developed between the United States Government and the foreign government which provides a list and quantity of surplus agricultural products that may be sold and the use of the currencies that accrue from such sales. The actual sales and shipment of the products are made through commercial trade outlets. Several fruit items have been offered under programs developed pursuant to this Act but no sales have been consummated.

The Mutual Security Act provides for the exchange of United States products to friendly countries for their currencies. The currencies obtained under this Act must be used for military or economic aid in the country in which the products are sold. This program is handled by the International Cooperation Administration of the State Department. A fair volume of fruit and fruit products have been sold under this program.

E. Federal Extension Service -- Clarence M. Ferguson, Administrator
Division of Agricultural Economics Programs -- H. M. Dixon, Director

The primary responsibility for and leadership in all educational programs and activities including the administration of the Smith-Lever Act, as amended, educational and demonstrational work in cooperative farm forestry, and all educational and demonstrational aspects of the Agricultural Marketing Act of 1946.

It is responsible for the coordination of all educational activities of the Department, including examination and analysis of all such activities current and contemplated, review and approval of all educational activities or proposals prior to initiation, advice and consultation on planning with heads of agencies, and reports and recommendations to the Secretary.

It acts as the liaison between the Department and officials of the Land-Grant Colleges and universities on all matters relating to cooperative extension work and educational activities relating thereto.

Within the framework of such functions the Federal Extension Service would carry on all educational work in the field of production and marketing fruits and vegetables.

Marketing Programs

A. FOOD DISTRIBUTION DIVISION --- M. D. Garber, Director

1. Food Trades Branch --- G. Chester Freeman, Chief.

The U. S. Department of Agriculture's Plentiful Food Program

The Plentiful Foods program helps increase the movement of foods in plentiful supply through normal channels of trade This is done by enlisting the cooperation and merchandising know-how of the food distribution industry and the promotional and educational resources of the various information media. By calling attention of large-scale buyers and homemakers to foods designated as plentiful, sales are stimulated during periods when peak supplies are being moved to markets. By placing increased emphasis on food items which may be temporarily in surplus supply or even a glut on the market, a threefold purpose is served: (1) increased consumption aids the producer by creating improved demand; (2) increased consumption means more sales or profit for those who deal in that commodity in the market place, (3) and consumers benefit by relative economy generally represented by a food which is plentiful in contrast to one in less abundant supply.

The program is entirely a cooperative activity and receives excellent support from private industry. To an increasing extent, food distributors and allied groups look to the Department's Plentiful Foods program for guidance in determining how best to use their merchandising resources to assist in the orderly movement of food supplies through regular trade channels.

The regular service that the program offers is a monthly list of foods determined to be in such supply that additional merchandising attention is needed to move them into the hands of consumers. These lists go to all segments of the food trade and seek their cooperation in stimulating sales of these foods through advertising displays and other promotional means. The list is also sent to newspapers, radio and TV stations throughout the country, as well as national magazines and other publications reaching both the public and food selling organizations. Simultaneously, food trade

representatives in the Department of Agriculture field offices work directly with food distributors in key market areas throughout the country. They direct the attention to the listed items by letter, telephone and personal visits with wholesalers, jobbers, retailers, restauranteurs and others, asking for their support by increasing their merchandising activities on the designated foods. Meantime, additional background material on the designated foods is furnished to all those in the information field who advise consumers -- to magazines and syndicates, advertising agencies, newspaper food editors, radio and TV food commentators. The flow of this material starts with the establishment of the list and is maintained throughout the month to which the list applies.

Special Plentiful Foods Merchandising programs are similar to this, but far more extensive. These special merchandising "drives" are conducted for foods when supplies are so large that they have created serious market problems and are conducted only at the request of producers and after assurance that the particular industry itself will actively participate. The Department's role in these special merchandising drives is to develop a coordinated ... program on the part of producers, the food industry and the Government in concerted effort to increase sales to consumers. To achieve the best possible results, the need for a program, proper timing, extent and intensity of the drive must be determined. It is in this field that the Department has been most successful in creating the understanding and obtaining the cooperation of the many and varied groups that can assist in a program of this type. Industry participation in these programs has now increased to the point where they are most accurately identified as industry-government promotions. Major efforts on special drives are concentrated in the large metropolitan areas where the greatest impact of consumer demand can be made.

The Plentiful Food Program is administered through the Food Distribution Division of the Agricultural Marketing Service, with the cooperation of the Extension Service and other agencies of the Department.

Additional information about the Plentiful Foods program may be obtained from the following offices:

Area Field Office
Food Distribution
Agricultural Marketing Service
U. S. Department of Agriculture

NORTHEAST	139 Centre Street, Room 506 New York 13, New York
SOUTHEAST	50 Seventh Street, N.E., Room 252 Atlanta 5, Georgia
MIDWEST	226 West Jackson Blvd., Room 1412 Chicago 6, Illinois

SOUTHEAST — 1114 Commerce Street, Room 1812
Dallas 2, Texas

WESTERN — Room 404 Appraisers Building
630 Sansome Street
San Francisco 11, California

2. School Lunch Branch --- Herbert D. Rorex, Chief
Direct Distribution Branch --- James A Hutchins, Jr., Chief

Section 6 Commodities

Approximately 80 percent of the $406 million worth of food used in the School Lunch program last year was purchased by schools from their local suppliers. Such purchases are made with funds from local and State sources and from cash assistance provided through the National School Lunch Act. (P.L. 396, June 4, 1946: 79th Congress). However, Section 6 of that Act provides that the Secretary of Agriculture may use a part of the school lunch appropriation to purchase additional foods for distribution to those schools participating in the National School Lunch Program. It is anticipated that approximately $15 million of the $83.2 million appropriated may be spent for Section 6 purchases in the fiscal year 1956. In considering the commodities to be purchased with Section 6 funds, primary emphasis is placed upon foods which will help meet the requirements of the Type A lunch and provide specific nutrients, such as Vitamin A and Vitamin C, which studies show are often lacking in children's diets.

In addition to the considerations noted above, it is fundamental in the purchase of commodities under Section 6 that the Department acquire the most food for the dollar spent. For this reason although Section 6 purchases are in no way considered as surplus removal, market conditions do play an important part in the quantity and in the types of foods purchased

The commodities which have been purchased for distribution during the fiscal year 1956 include: dried apricots, canned cherries, grapefruit sections, green peas, tomatoes and peanut butter. Other commodities may be acquired to complete this year's Section 6 program, but no final purchases have been made.

B. FRUIT AND VEGETABLE DIVISION --- S R Smith, Director

1. Acreage-Marketing Guides

Vegetable Branch --- K W. Schaible, Chief

Acreage-Marketing Guides for Vegetables, including potatoes and sweetpotatoes, are announced each year by the U. S. Department of Agriculture to aid growers in development of their planting plans according to seasons. The program provides the best possible estimates of the acreage of particular vegetables required, with average yields, to supply the quantity of these vegetables deemed necessary to meet the market needs anticipated for the coming season. In the development of the guides, consideration is given to forecasts of economic conditions together with such information as stocks, rates of disappearance, production and price trends, and competition with other commodities. The program is directed toward balancing the supply of each vegetable with the demand for it. While compliance is voluntary the program provides the vegetable industry with the kind of basic planning that every big and

successful industry undertakes in the development of production and marketing program for a year ahead. When growers have kept within the acreage levels recommended by the Department, few marketing difficulties have been encountered. Dissemination of the guides information and the educational phases of the program are carried on cooperatively by the Extension Service and the Fruit and Vegetable Division, AMS.

2. Marketing Agreements and Orders

Fruit Branch -- P. A. Nicholson, Chief
Specialty Crops Branch -- J. C. Genske, Chief
Vegetable Branch -- K. W. Schaible, Chief

Federal marketing agreement and order programs regulate the handling of agricultural commodities in interstate or foreign commerce. They may also cover intrastate movement which burdens, obstructs, or affects interstate commerce. These programs are based upon the Agricultural Marketing Agreement Act of 1937, as amended. They reach back legislatively beyond 1937, however, to the Agricultural Adjustment Act of 1933, and their legislative genesis can be traced farther back to the post-World War I, and even prewar, cooperative efforts of farmers to improve the quality of the commodities marketed and to balance shipments to the market demand.

Basically, the objective of a marketing agreement and order program is to increase returns to producers. The Congress provided, however, that the interests of consumers were to be protected also. The original provisions of the Act stated that it was the declared policy of Congress to: (1) establish and maintain such orderly marketing conditions for agricultural commodities as will return parity prices to farmers, and (2) protect the the interest of consumers by approaching the parity level gradually and by taking no action for the purpose of maintaining prices above parity. Subsequently, this policy was enlarged to authorize, for specified commodities, the establishment of: (1) such minimum standards of quality and maturity and such grading and inspection requirements "as will be in the public interest" and (2) such orderly marketing conditions as will provide, "in the interests of producers and consumers," an orderly flow of supplies to market during the normal marketing season "to avoid unreasonable fluctuations in supplies and prices."

A more complete discussion of these programs is included elsewhere in this Outlook Conference Fruit and Vegetable Work Session Material.

3. Marketing Clinic

Fruit Branch --- P.A. Nicholson, Chief
Vegetable Branch --- K. W. Schaible, Chief

Marketing Clinic Program

The Fruit and Vegetable Division has undertaken a marketing clinic program on a limited scale for the express purpose of assisting the industry in analyzing and solving its own marketing problems. The clinics are industry-

sponsored with some assistance from the Department in setting up the program. They may be national in scope or conducted on a local or regional basis. Participants may be made up of growers and representatives of grower organizations, bankers, processors, shippers, and handlers or representatives of their organizations, extension personnel, university and experiment station people plus interested State and Federal inspection and marketing officials. The program is set up to encourage participation of all those present and to bring together the latest and best available information on production and marketing of the various fruit and vegetable crops. This includes production and acreage trends, the supply and demand situation (foreign as well as domestic), historical price data, marketing costs, merchandising practices, and handling and storing methods. The operation of Government programs such as marketing agreement and orders, surplus removal through Section 32 purchases, School Lunch supply with Section 6 funds, export subsidy, and other diversion programs also are discussed to bring out industry reaction to them. The research activities of industry, State and Federal organizations are presented and discussed toward improving the present products and marketing practices as well as developing new products and uses for the commodity under study. All this information is developed to enable the participants to discuss and attempt to solve the immediate marketing problems and work toward the solution of the long-range problems as well. Possible solutions to the marketing problems are discussed and recommendations or proposals are developed by the group for positive action to be taken in an attempt to correct the immediate situation and plan a long long-range marketing program.

The Fruit Branch has participated this past year in marketing clinics with the citurs industry, Eastern apple industry, the lemon industry, and the Kadota fig industry. It is contemplated that the marketing clinic program may be extended to some of the other fruit industries where distribution and surplus problems arise. Annual clinics may be extended to some of the industries other than the citrus and Eastern apple group which have been conducted on an annual basis.

As its initial project under this program, the Vegetable Branch is cooperating with the Extension Service in a survey in 25 counties in East Texas with the purpose of developing a more effective marketing program for vegetables in the area. Requests have been received and similar work is contemplated in several other States.

4. Section 32 Surplus Removal

Fruit Branch --- P. A. Nicholson, Chief
Specialty Crops Branch --- J. C Genske, Chief
Vegetable Branch --- K. W. Schaible, Chief

Section 32 of Public Law No. 320, 74th Congress, as amended, provides authority for lending a degree of stability to the marketing of fruits and vegetables. Money available for this purpose can be used when the situation warrants for (1) encouraging exports by the payment of export benefits or of indemnities for losses in connection with such exports; (2) encouraging domestic consumption by diverting the commodity from the normal channels of

trade or by purchases and donations to the school lunch program, eligible institutions, and for relief purposes, or (3) making payments to farmers in connection with normal production for domestic consumption in order to reestablish farmer's purchasing power. No fruit or vegetable programs have been carried out under Clause (3) in recent years. In administering operations under Section 32, the Department's objectives are to provide limited price assistance to farmers confronted with price depressing surpluses, to expand foreign markets for surplus American farm products, to improve the diets of school children and needy persons, and to encourage new uses or new markets for commodities diverted from the normal channels of trade.

In attaining these objectives for fruits and vegetables, operating methods are kept relatively simple. In an export program, the exporter is informed as to the amount of the export payment established per unit. Foreign buyers may then buy from their domestic suppliers at prices below domestic market prices, by the amount of the subsidy. The transaction is handled through regular trade channels, and after export the supplementary export payment may be claimed.

Commodities purchased in an area of surplus are bought by USDA field personnel, generally from growers, grower's agents, or grower associations. Quantity purchases is limited to that which can be utilized in the school lunch program and by eligible institutions. Section 32 funds are used to pay also for shipping the commodity to central receiving points within States, and State distributing agencies take over the job of allocating to eligible recipient organizations. In a diversion program, the government does not acquire ownership of the commodity but makes a payment to the diverter conditioned upon his use of the commodity in the approved outlet. Outstanding advantages of this type of program in instances of heavy surplus are the high rate of disappearance obtained per dollar expenditure (usually no grading, packing or transportation costs), coupled with the fact that lower qualities tend to go to the diversion outlet leaving the better qualities for commercial trade. The principal benefit to growers is the over-all improvement in market prices expected to be obtained by disposal of the surplus.

Certain factors are required to be considered before undertaking such assistance. These factors are: (1) The supply of the commodity in relation to the demand therefor, (2) The price levels at which other commodities are being supported, (3) The availability of funds, (4) The perishability of the commodity, (5) The importance of the commodity to agriculture and the national economy, (6) The ability to dispose of stocks acquired through a price support operation, (7) The need to offsetting temporary losses of export markets, and (8) The ability and willingness of producers to keep supplies in line with demands. In the case of fresh vegetables, Section 32 operations generally may be carried out only in areas where extent of plantings is in substantial compliance with the Department's Acreage-Marketing Guides. These guides are issued seasonally as an aid to growers

in the preparation of their production and marketing plans. Also, for both fruits and vegetables a substantial portion of the crop must remain to be harvested. Surplus removal operations are not undertaken to clean up tag-end supplies. Other factors may require consideration according to the specific situation. From the long range point of view, however, these price-assistance and surplus removal activities work to encourage the industry to solve its own price-supply problems and should minimize the [illegible] possible tendency for subsequent crops to be planted with government price assistance primarily in mind.

MARKETING RESEARCH DIVISION --- H. C. Trelogan, Director

C. The Agricultural Marketing Service administers or participates in the administration of broad agricultural marketing research and development programs. These are aimed at increasing the efficiency with which agricultural products are taken in the raw state from the farm and placed in the hands of consumers in the forms, at the times, and in the places desired by consumers. Research methods are applied to the solution of marketing problems such as improving quality, reducing costs, and expanding outlets for agricultural products. This involves research on the assembly, transportation, storage, handling, packaging, distribution, and pricing of farm products, and the structure, financing, and organization of domestic markets. There are four branches in the Marketing Research Division.

The Market Development Branch, R. M. Walsh, Chief, conducts marketing research relating to new and expanded market outlets for agricultural products. It emphasizes market potentials, economic aspects of expanded outlets for new or established products, economic feasibility of waste disposal and byproduct utilization, consumer preferences, new market outlets through distribution programs, and methods and practices to improve the merchandising of agricultural products. The activities of the Branch are conducted through four Sections -- Market Surveys, Product Development, Merchandising Methods, and Distribution Programs Research.

The Biological Sciences Branch, W. T. Pentzer, Chief, conducts marketing research relating to the measurement, protection, and improvement of quality of agricultural products as they pass through the marketing system. Its emphasis is on physiological, biochemical, pathological, and entomological problems, and on the physical and biological evaluation of quality factors. The work of the Branch is aimed at reducing marketing costs through improved quality and acceptability of farm products and reduction of waste and spoilage. This work includes improving storage methods, developing new devices and methods for determining product quality, and appraising the adequacy of grades and standards. The activities of the Branch are conducted through three Sections -- Quality Maintenance and Improvement, Quality Evaluation, and Stored-Product Insects.

The Transportation and Facilities Branch, W. C. Crow, Chief, conducts marketing research with emphasis on economic and engineering research relating to transportation, wholesaling and retailing, handling and facilities, and market facility planning. The work is directed toward improving methods, equipment, and facilities for transporting, handling, storing and distributing farm and food products in order to increase the efficiency of marketing. The activities of the Branch are conducted through four Sections -- Marketing Facility Planning, Transportation, Wholesaling and Retailing, and Handling and Facilities Research.

The Market Organization and Costs Branch, D. B. DeLoach, Chief, conducts marketing research with emphasis on economic and cost analysis studies. Its work relates to the marketing of specific agricultural commodities, the organization, structure, and practices of commodity markets, and informational, statistical, and other services needed for the management of market firms. The Branch develops facts relating to marketing practices, channels, and organizations and their impact on costs; regularly measures the changes in farm-to-retail price spreads on food and fibers; and analyzes marketing costs and relates the cost of service to the service rendered. It compares costs and develops standards of efficiency to aid farmers and marketing agencies in reducing marketing costs and in improving services and effecting economies in the use of resources. The activities of the Branch are conducted through nine Sections -- Dairy, Fruit and Vegetables, Livestock, Fibers, Special Crops, Poultry, Market Structure and Practices, Marketing Information and Statistics, and Grains and Feeds.

UNITED STATES DEPARTMENT OF AGRICULTURE
Foreign Agricultural Service
Grain and Feed Division

WORLD RICE PRODUCTION AND TRADE 1/

Production

The 1955-56 world rice crop, excluding Communist China, North Korea, and the Soviet Union, is the second largest on record. The current year's harvest is forecast at 2,700 million cwt. of rough rice, an increase of 3 percent over last year and only about 2½ percent below the all-time record in 1953-54. This year's large crop is due both to increased acreage and to higher yields per acre.

The total Asian production increased, despite floods in India and Pakistan. Japan reports a record crop. Europe and South America also indicate gains over last year. North America is the only continent reporting a smaller crop. In the United States acreages decreased 624,000 acres and small declines occurred in Cuba and the Dominican Republic.

Trade

The increase in the total world rice crop does not necessarily indicate a corresponding gain in the volume of international trade in rice. In the postwar period, only about 5 percent of world production has moved in world trade channels. Such factors as the price relationships with other cereals, policies of importing governments, and variation in national levels of per capita consumption exert far more influence on the amount of rice moving in trade than the changes in total world production.

World trade in rice still is only slightly over 50 percent of the prewar average. As a result of a world shortage in rice in the early postwar period, and higher prices later, at a time when exportable supplies did become available, many importing countries turned to substitutes, including other cereals. This shift is illustrated by a comparison of total imports of all cereals, including rice, into Asian countries during the prewar and postwar periods. Before World War II, Asia imported approximately 8 million tons of cereals, of which rice accounted for about 7 million. Now, nearly 20 years later, total cereal imports have reached around 11 million tons, with rice amounting to 4 million tons.

In 1954, world trade in rice increased moderately. Complete data for 1955 are not yet available, but it appears that there may be a further slight gain. A development during 1955 has been the negotiation of a number of barter agreements between Asian rice exporters and the U.S.S.R., the European satellites, and Communist China. If rice continues to move under such arrangements, a fairly substantial amount might go to these areas

1/ Prepared for the 1956 Agricultural Outlook Conference held in Washington, D.C., November 28 - December 1, 1955.

Agriculture - Washington

which have not imported large quantities since prewar. Some of the rice involved may be low-quality and used for animal feed and industrial purposes.

A substantial increase occurred during 1955 in the movement of low-quality rice and by-products for animal feed. The destinations of such shipments have been chiefly Hong Kong and Western Europe. Prior to World War II, Europe was a substantial importer of rice and rice by-products for feed, but this is the first year since prewar that any sizable quantities have been shipped to these areas for this purpose. Such shipments in 1955 were largely the result of lower prices and aggressive sales promotion on the part of Asiatic exporting countries.

Importing countries with rigid controls on imports of rice and other cereals have not increased rice imports to any extent following a decline in world rice prices which took place during 1954-55. It is apparent that some importers are awaiting the possibility of further downward adjustments which would make a still more favorable price relationship with other cereals. Another factor in limiting imports is the competition in rice-importing countries for funds to carry out ambitious plans for economic development.

Exports for 1955-56 are uncertain at this time. If exports reach as much as 23 million cwt., in terms of rough rice (16 million bags of milled rice), the carry-over on August 1, 1956, would total almost 29 million cwt., or a little higher than in 1955. Exports totaled 9.8 million cwt. in terms of milled rice in 1954-55, and 17.2 million in the peak year of 1952-53.

Stocks

The stocks held by Asian exporters at the end of 1955 will be considerably smaller than a year earlier. In December 1954, Thailand had stocks of about 600,000 tons of milled rice - a considerable portion of which was poor-quality, or "broken." This compares with a satisfactory carry-out of about 200,000 tons. At the end of 1955, Thailand will have practically no carry-over in the form of exportable stocks.

At the end of 1954, Burma had a carry-over of more than 800,000 tons, a large part of which was poor-quality. Burmese carry-over on December 31, 1955 will be 450,000 to 500,000 tons of milled rice, or even lower. Much of this will be 1954 crop rice which is of better quality than the carry-over stocks a year ago. A satisfactory carry-over for Burma would also be about 200,000 tons.

Last year Pakistan had over a 200,000-ton surplus. Recently, because of flood losses, this country temporarily embargoed further shipments of rice.

On the other hand, stocks in the exporting countries of Europe and the Western Hemisphere have increased. However, the largest stocks are located in the United States, where on August 1, 1955, they were about 850,000 tons as compared with 250,000 tons a year earlier. The United States holds more than half of the world's export availability.

Prices

The following comparison on the basis of September-October prices of milled rice in 1954 with those of the same period in 1955 shows some weakening in these exporting countries:

	Sept.-Oct. 1954 100 pounds	Sept.-Oct. 1955 100 pounds
Burma		
SMS - 42% brokens	$6.25	$5.25
Thailand		
20% brokens	6.10	5.48
Italy		
Originario 5% brokens	8.00	6.21

In view of the large stocks held in the United States, this country assumes an important role in preventing world prices from declining significantly.

Outlook for United States Rice

The key to the problem of maintaining United States rice acreage lies in the ability to export rice to Asia. If we are to avoid continued drastic restrictions on acreage, we need to export annually some 10 million bags of United States rice to that area. If Japan buys from us an average of 4.0 to 6.5 million bags, there remains some 3.5 to 6.0 million bags to be disposed of in other countries. With current freight rates now sharply above rates in 1954 and with United States prices relatively higher than world prices, this may be difficult to achieve. One factor will be the policy of importing countries as to increasing rice imports relative to the size of the total cereal deficit. Another is a decision as to whether they will build national stocks in order to create a greater stability. Decisions to increase such stocks may not be taken unless importers believe that no further declines will occur in rice prices.

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UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Agricultural Marketing Service
Division of Agricultural Economics

UNITED STATES SUPPLIES OF WHEAT BY CLASSES 1/

Supplies of wheat in the United States are at record high levels, with carryover stocks July 1, 1955 of hard red winter and white wheat very large, those of hard red spring moderately large, and soft red winter still above average. However, durum stocks are below average reflecting reduced production resulting from damage from 15B rust.

The carryover for July 1, 1956 is expected to show a further increase in hard red winter, hard red spring and white wheat, with a reduction in soft red winter and no material change in the below normal stocks of durum.

Table 1 shows the July 1 carryover for 1954 and 1955, with 1956 projected, and the change between 1955 and 1956. Table 2 shows the estimated supply and distribution upon which table 1 is based, and shows comparative data beginning with 1941.

Table 1.- Wheat: Estimated carryover by classes, July 1, 1954-56

Class	1954	1955	1956	Change, 1956 from 1955
	Million bushels	Million bushels	Million bushels	Million bushels
Hard red winter	535	666	687	+ 21
Soft red winter	70	60	34	- 26
Hard red spring	188	160	182	+ 22
Durum	5	3	3	0
White	104	132	137	+ 5
Total	902	1,021	1,043	+ 22

Each class has its particular food uses. Hard red spring and hard red winter wheats are suited especially for bread flour when they contain relatively large amounts of protein of desirable quality, and have other properties needed in bread baking. Soft red winter and soft white flour are both generally low in protein, and, because of this characteristic, are especially suitable for pastry, crackers, biscuits, and cakes. Durum wheat is processed into semolina, a coarse grind, which is used in making macaroni and spaghetti, and related products. The various classes of wheat are produced in four wheat-producing areas, which overlap considerably. These are shown in the accompanying chart.

1/ Prepared for the 1956 Agricultural Outlook Conference held in Washington, D.C., November 28-December 1, 1955.

Agriculture - Washington

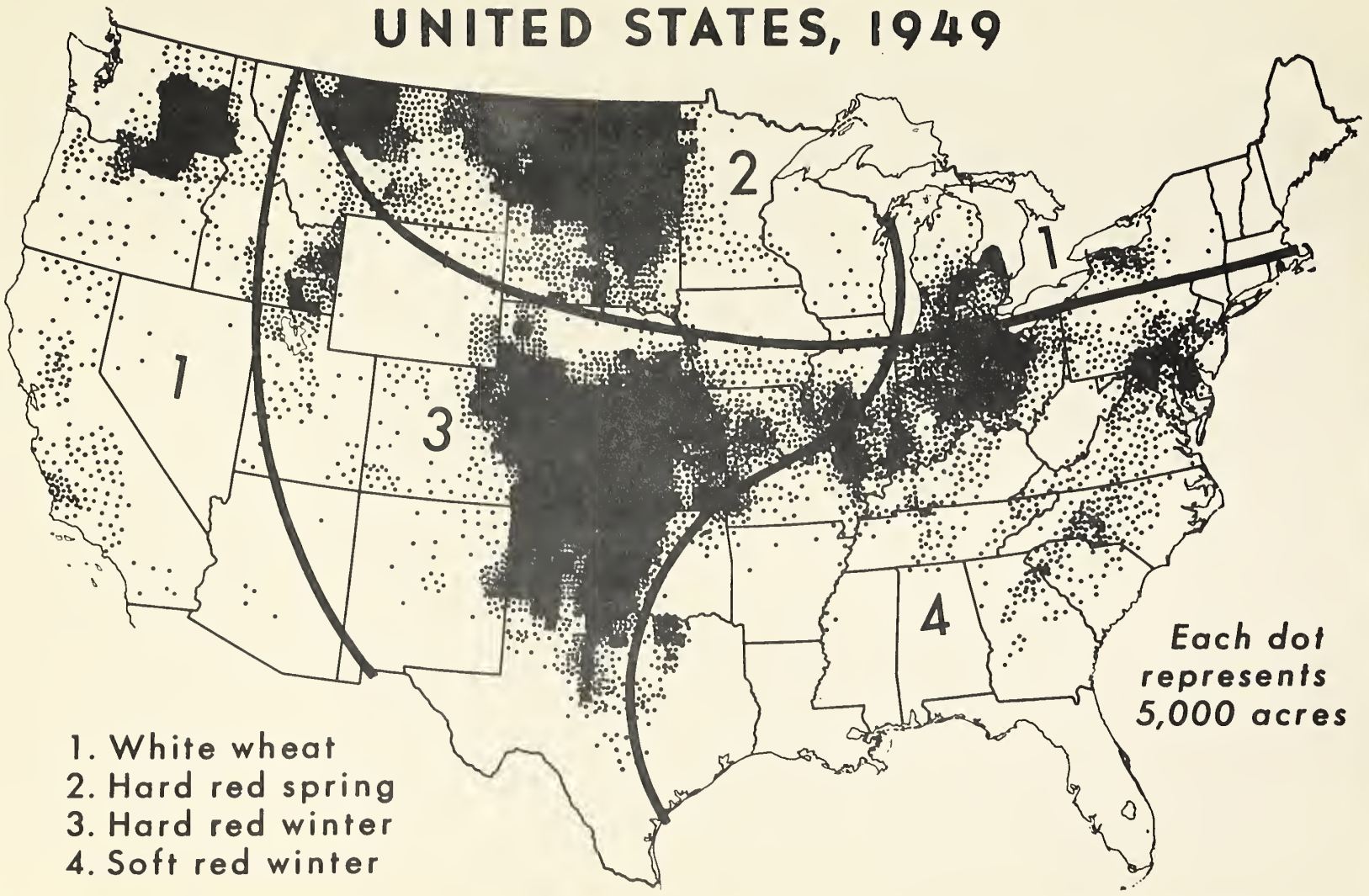
Table 2 .- Estimated supply and distribution of wheat, by classes, continental United States, 1951-55 1/

Item	Year beginning July														
	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954 2/	1955 2/
	Mil. bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
All wheat															
Stocks, July 1	385	631	619	317	279	100	84	196	307	425	396	256	562	902	1,021
Production	942	969	844	1,060	1,108	1,152	1,359	1,295	1,099	1,019	981	1,299	1,170	970	916
Imports	4	1	136	42	2	0	0	1	2	12	32	21	6	4	4
Supply	1,331	1,601	1,599	1,419	1,389	1,252	1,443	1,492	1,408	1,456	1,409	1,576	1,738	1,876	1,941
Exports 3/	32	33	44	148	393	401	489	507	302	369	479	321	220	277	279
Carryover	631	619	317	279	100	84	196	307	425	396	256	562	902	1,021	1,043
Domestic disappearance	668	949	1,238	992	896	767	758	678	681	691	674	693	616	578	619
Hard red winter															
Stocks, July 1	160	291	317	113	109	37	28	110	167	252	214	97	358	535	666
Production	396	486	364	468	521	582	744	648	541	459	376	715	493	471	398
Supply	556	777	681	581	630	619	772	758	708	711	590	812	851	1,006	1,064
Exports 3/	20	20	20	104	237	271	338	352	180	199	251	184	78	123	139
Carryover	291	317	113	109	37	28	110	167	252	214	97	358	535	666	687
Domestic disappearance	245	440	548	368	356	320	324	239	276	298	242	270	238	217	238
Soft red winter															
Stocks, July 1	40	54	29	18	19	11	8	16	16	29	24	16	38	70	60
Production	204	149	125	203	208	183	210	211	203	162	151	199	243	200	184
Supply	244	203	154	221	227	194	218	227	219	191	175	215	281	270	244
Exports 3/	2	1	1	13	66	31	45	42	35	30	23	40	56	62	55
Carryover	54	29	18	19	11	8	16	16	29	24	16	38	70	60	34
Domestic disappearance	188	173	135	189	150	155	157	169	155	137	136	137	155	148	155
Hard red spring															
Stocks, July 1	136	206	205	151	112	39	31	48	79	86	104	117	121	188	160
Production	202	206	227	236	221	215	220	226	169	207	255	182	219	144	4/185
Imports	4	0	133	38	0	0	0	1	2	12	30	21	6	4	4
Supply	342	412	565	425	333	254	251	275	250	305	389	320	346	336	349
Exports 3/	2	2	7	24	53	39	49	59	23	49	87	17	11	28	23
Carryover	206	205	151	112	39	31	48	79	86	104	117	121	188	160	182
Domestic disappearance	134	205	407	289	241	184	154	137	141	152	165	182	147	148	144
Durum															
Stocks, July 1	25	34	27	14	8	5	9	10	18	25	24	15	7	5	3
Production	41	42	34	30	33	36	45	46	40	38	36	23	14	8	4/19
Imports	0	1	3	4	2	0	0	0	0	0	2	---	---	---	---
Supply	66	77	64	48	43	41	54	56	58	63	62	38	21	11	22
Exports 3/	1	1	1	2	1	4	15	4	2	16	15	3	---	---	---
Carryover	34	27	14	8	5	9	10	18	25	24	15	7	5	3	3
Domestic disappearance	31	49	49	38	37	28	29	34	31	29	32	28	16	8	19
White															
Stocks, July 1	24	46	41	21	31	8	8	12	27	33	30	11	38	104	132
Production	99	86	94	123	125	136	140	164	146	153	163	180	201	149	130
Supply	123	132	135	144	156	144	148	176	173	186	193	191	239	253	262
Exports 3/	7	9	15	5	36	56	42	50	62	81	103	77	75	64	62
Carryover	46	41	21	31	8	8	12	27	33	30	11	38	104	132	137
Domestic disappearance	70	82	99	108	112	80	94	99	78	75	79	76	60	57	63

1/ 1929-1940 in the Wheat Situation, September 1943, page 12. 2/ Subject to revision. 3/ In addition to wheat grain, includes grain equivalent of flour made from U.S. wheat; also semolina and macaroni (in terms of wheat) for years beginning July, in million bushels, as follows: 1942, 1; 1943, 1; 1944, 2; 1945, 1; 1946, 3; 1947, 6; and 1948, 1; other years less than 1. Also, includes shipments to territories of the United States. 4/ The durum wheat production estimate for 1955 was increased from 14.9 million bushels as published in Crop Production, August 10, 1955, to 19.5 million so as to include probable durum production in Montana. The estimate for hard red spring was reduced correspondingly. These adjustments are made in accordance with the statement in Crop Production, page 10.

Note.- Figures in this table are not based on survey nor enumeration data and are therefore only approximations. Estimated stocks on farms and in interior mills, elevators, and warehouses by kinds, are assumed to be present in about the same proportion as produced; the classes within kinds are established on the basis of the quinquennial wheat-variety surveys. Commercial stocks are reported by classes, and merchant mill stocks are broken down largely on the basis of the distribution by classes of commercial stocks, after making allowance for quantities going for export. Exports and shipments by classes are estimated on the basis of "inspection for export" for wheat as grain, and on the basis of the area from which exports are made for flour; also, on the basis of records of the former War Food Administration and the Department of Agriculture, and export indemnifying agencies.

DISTRIBUTION OF WHEAT IN THE UNITED STATES, 1949



U. S. DEPARTMENT OF AGRICULTURE NEG. 1353-55 (1) AGRICULTURAL MARKETING SERVICE

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CHANGES IN COTTON PRODUCTION

This statement was prepared in Production Economics Research Branch, Agricultural Research Service, for use in the 33rd Annual Outlook Conference.

As a basis for looking at the longer term cotton production situation, it is desirable to examine and analyze trends, to evaluate recent changes, and to appraise new developments.

Significant changes have occurred in cotton production in the United States during the last 25 years. Great reductions in acreage have been accompanied by large increases in yields per acre. During the 1928-32 period, an average of about 41.4 million acres were planted to cotton annually in the United States. They produced about 14.7 million bales. During 1950-54 an average of about 23.8 million acres were in cotton and 14.1 million bales were produced. Yields of lint have increased from an average of about 170 pounds (per acre in cultivation July 1) during 1928-32 to about 295 pounds during 1950-54 - an increase of 125 pounds per acre, or about 70 percent.

The major objective of this paper is to analyze the change in cotton yields. Among the more important factors associated with increased yields are: Shifts in acreage among areas, increased use of fertilizer, irrigation, more effective insect control, selection of land for cotton growing on individual farms, and other improved practices which include new varieties and better tillage.

Shifts in Acreage Among Production Areas

The trends in acreage, yield, and production have not been the same among areas (tables 1, 2, and 3). During the last 25 years there has been a considerable shift among areas. For example, in 1928-32 only 3.2 percent of the total United States crop was produced in the irrigated areas of the Far West, compared with 20.7 percent during 1950-54 (table 2). The Delta areas, the High Plains, and the Lower Rio Grande Valley areas of Texas also have increased their proportion of the total production. In general, these areas have yields considerably above the United States average. The shift in acreage among areas accounts for about 30 pounds of the total increase of 125 pounds per acre between the two periods.

Increased Use of Fertilizer

There has been an increase in the proportion of the cotton acreage receiving fertilizer as well as higher rates of application on the acreage fertilized (table 4). An average of 85 pounds of fertilizer was used per

acre of cotton planted during 1928-32 compared with an average of about 195 pounds during the 1950-54 period. Furthermore, the plant nutrient content of the fertilizer was considerably higher during the latter period. The increased use of fertilizer probably accounts for about 50 of the 125 pound increase in yields between the two periods. Even so, it appears that the rate of application is considerably below optimum.

Analysis of yield responses to fertilizer may give some clews as to the profitability of higher rates of applications. Table 5 shows calculated yields at different rates of application of plant nutrients. This analysis indicates that, at 1954 rates of application of fertilizer (about 80 pounds of nutrients) and current prices, an additional dollar spent for fertilizer would result in an additional yield worth $5 after deducting harvesting and ginning costs. It is estimated that marginal return is equal to 3 times marginal costs with an application of 224 pounds of nutrients per acre. With average weather and good production practices, this rate of fertilization would give a calculated yield of about 560 pounds of lint per acre. This is more than 200 pounds above the average yield obtained in the 7 States during 1953-54. Apparently it is reasonable to expect a continuation of the increase in the rate of fertilization which likely will result in still higher yields of cotton.

Selection of Land

As the acreage of cotton has decreased the selection of the best adapted land for cotton growing on individual farms has been an important factor in increasing yields on individual farms and in areas. However, selection of land on individual farms probably will not contribute as much to additional increases in yield in the future as it has done during the last 25 years.

Irrigation

In the low rainfall areas of the Far West irrigation is necessary for production of cotton and the acreage of cotton has increased as irrigation facilities expanded. In other areas, irrigation is relatively new. For example, in the High Plains cotton area of Texas, little or no cotton was irrigated in the early forties whereas in 1953 it is estimated that about 1.7 million acres of cotton were irrigated. This has increased the yields of lint in this important cotton area. There is much interest in irrigation of cotton in other areas in the humid regions. It is likely that this practice will increase in future. If so, it will increase yields.

Insect Control - Cultural Practices

It is difficult to assess the exact contribution of individual practices, such as insect control, better varieties of seed and better tillage methods, to increased cotton yields. But it is known that they have had an important effect and they they are likely to continue to increase yields substantially in the future.

In summary, this analysis indicates that there are strong reasons for believing that per acre yields of cotton will continue to increase even though recent increases have been rather substantial.

Table 1.- Cotton acreage for specified 5-year periods by major production regions, as a percentage of the 1928-32 average

Cotton production areas	1928-32 average	Percentage of 1928-32 average			
		1933-37	1938-42	1943-47	1950-54
	1,000 acres	Percent	Percent	Percent	Percent
Eastern Coastal Plain	4,834	77.8	61.7	43.6	52.3
Piedmont	3,085	74.0	57.6	44.8	30.8
Limestone Valleys	1,131	74.1	59.3	55.9	52.4
Sand Mountain	338	72.2	59.7	62.1	51.1
Black Belt (Alabama and Mississippi)	1,028	71.0	55.2	45.2	40.9
Other Southeast	133	83.1	62.4	35.5	33.6
Clay Hills	1,520	77.2	61.6	52.8	48.7
Brown Loam	1,643	79.4	66.3	59.2	59.5
Delta	4,866	81.5	69.1	67.9	79.3
Arkansas River Valleys and Uplands	1,264	72.6	52.6	33.9	16.4
Western Sandy Coastal Plain	3,564	70.5	48.8	25.5	17.7
Other Mid-South	339	86.6	63.6	43.3	34.2
Lower Rio Grande Valley	214	83.8	92.5	117.8	300.0
Corpus Christi	414	82.6	59.3	46.8	65.7
Coastal Prairie	789	82.1	56.2	46.0	55.0
Blackland (Texas)	5,262	74.1	51.0	47.1	45.4
Rolling Plains	5,287	76.3	50.8	43.2	54.7
High Plains	1,239	91.5	84.8	80.1	176.0
Western Irrigated	626	113.8	121.6	120.5	336.8
Other Southwest	3,648	80.3	48.1	29.2	40.3
U. S. total	41,424	77.7	58.4	47.9	56.1

Table 2.- Trends in cotton production, by periods and by regions

Cotton production areas	1928-32		1933-37		1938-42		1943-47		1950-54	
	Production	Percentage of U.S. total	percentage of 1928-32	US total	Percentage of 1928-32	US total	Percentage of 1928-32	US total	Percentage of 1928-32	US total
	1,000 bales	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Eastern Coastal Plain	1,912	13.0	99.7	14.7	74.9	12.0	66.7	12.0	79.3	10.9
Piedmont	1,376	9.4	81.4	8.7	71.4	8.2	63.2	8.2	38.3	3.8
Limestone Valleys	481	3.3	86.7	3.2	80.2	3.2	92.6	4.2	71.9	2.5
Sand Mountain	175	1.2	85.0	1.2	90.0	1.3	102.2	1.7	64.8	.8
Black Belt (Alabama and Mississippi)	298	2.0	95.8	2.2	65.2	1.6	81.2	2.3	76.1	1.6
Other Southeast	55	.4	106.0	.4	79.3	.4	48.5	.2	50.5	.2
Clay Hills	544	3.7	95.5	4.0	75.3	3.4	86.7	4.4	81.1	3.2
Brown Loam	644	4.4	100.1	5.0	106.9	5.7	100.1	6.1	115.5	5.3
Delta	2,285	15.6	102.5	18.1	119.3	22.8	110.8	23.8	130.9	21.5
Arkansas River Valley and Uplands	368	2.5	67.8	1.9	82.5	2.5	41.4	1.4	20.8	.5
Western Sandy Coastal Plain	1,006	6.9	72.3	5.6	57.8	4.8	29.4	2.8	23.3	1.7
Other Mid-South	123	.8	93.0	.8	97.4	1.0	68.6	.8	53.8	.5
Lower Rio Grande Valley	69	.5	107.7	.6	129.4	.8	232.9	1.5	552.2	2.7
Corpus Christi	167	1.1	83.0	1.1	71.8	1.0	59.0	.9	73.6	.9
Coastal Prairie	310	2.1	74.3	1.8	60.3	1.6	50.9	1.5	84.6	1.9
Blackland (Texas)	1,608	11.0	72.3	9.0	53.9	7.2	46.8	7.1	47.9	5.5
Rolling Plains	1,430	9.7	68.3	7.6	64.2	7.7	45.8	6.2	48.7	5.0
High Plains	333	2.3	114.9	3.0	123.6	3.4	127.9	4.0	292.8	7.0
Western Irrigated	476	3.2	150.8	5.6	171.3	6.8	173.2	7.7	610.9	20.7
Other Southwest	1,007	6.9	71.1	5.5	54.2	4.6	33.9	3.2	52.8	3.8
U. S. Total	14,667	100.0	88.2	100.0	81.7	100.0	72.5	100.0	95.2	100.0

Table 3.- Yield per acre of cotton in cultivation July 1 for specified periods as a percentage of 1928-32 average yield

Cotton production areas	1928-32 average yield	Percentage of 1928-32 average			
		1933-37	1938-42	1943-47	1950-54
	Pounds	Percent	Percent	Percent	Percent
Eastern Coastal Plain	190	127.9	121.1	151.1	149.3
Piedmont	214	110.3	123.9	140.6	124.4
Limestone Valleys	204	117.2	135.3	165.7	137.4
Sand Mountain	246	119.1	151.6	166.1	130.5
Black Belt (Alabama and Mississippi)	138	137.1	120.0	181.4	186.8
Other Southeast	202	124.4	122.1	130.1	144.1
Clay Hills	171	125.6	123.2	165.1	166.7
Brown Loam	187	126.7	161.6	169.2	193.6
Delta	225	125.3	172.4	164.6	165.8
Arkansas River Valley and Uplands	140	92.3	155.6	122.4	135.0
Western Sandy Coastal Plain	136	102.6	116.3	112.1	136.0
Other Mid-South	175	105.7	154.7	152.9	160.0
Lower Rio Grande Valley	153	126.1	139.9	195.7	200.0
Corpus Christi	192	100.5	121.4	127.2	122.4
Coastal Prairie	188	89.6	105.6	110.5	156.9
Blackland (Texas)	147	96.6	104.5	99.5	106.8
Rolling Plains	133	84.4	123.3	103.2	94.0
High Plains	129	112.7	145.3	145.9	169.8
Western Irrigated	364	128.8	141.2	142.3	189.3
Other Southwest	127	86.8	111.3	112.6	129.9
U. S. Total	170	113.1	139.3	150.8	158.8

Table 4.- Fertilizer used on cotton, United States, selected periods

Period	Proportion of acreage receiving fertilizer	Fertilizer used	
		Per acre receiving fertilizer	Per acre in cultivation July 1
	Percent	Pounds	Pounds
1928-32	34	245	85
1933-37	31	257	80
1938-42	43	284	123
1943-47	47	331	154
1950-54	56	346	194

Table 5.- Estimated rates of application of plant nutrients to obtain specified marginal returns per dollar spent for fertilizer, and associated yields of lint cotton per acre - 7 Southern States 1/

Marginal 2/ returns per dollar spent (dollars)	Rates of application per acre				Calculated yields per acre	Additional yield per pound of additional nutrients
	N	P_2O_5	K_2O	Total		
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
1.00	167	141	139	447	734	0.60
2.00	122	96	98	316	655	1.02
3.00	92	64	68	224	561	1.46
4.00	61	33	37	131	425	2.04
5.00 3/	36	24	21	81	4/ 323	

1/ N. C., S. C., Ala., Ga., Miss., Ark., and La. This analysis is based primarily on material derived from estimates of cotton yield response to varying rates of application of fertilizer, as reported in USDA Handbook 68, Fertilizer Use and Crop Yields in the U. S., Dec. 1954.

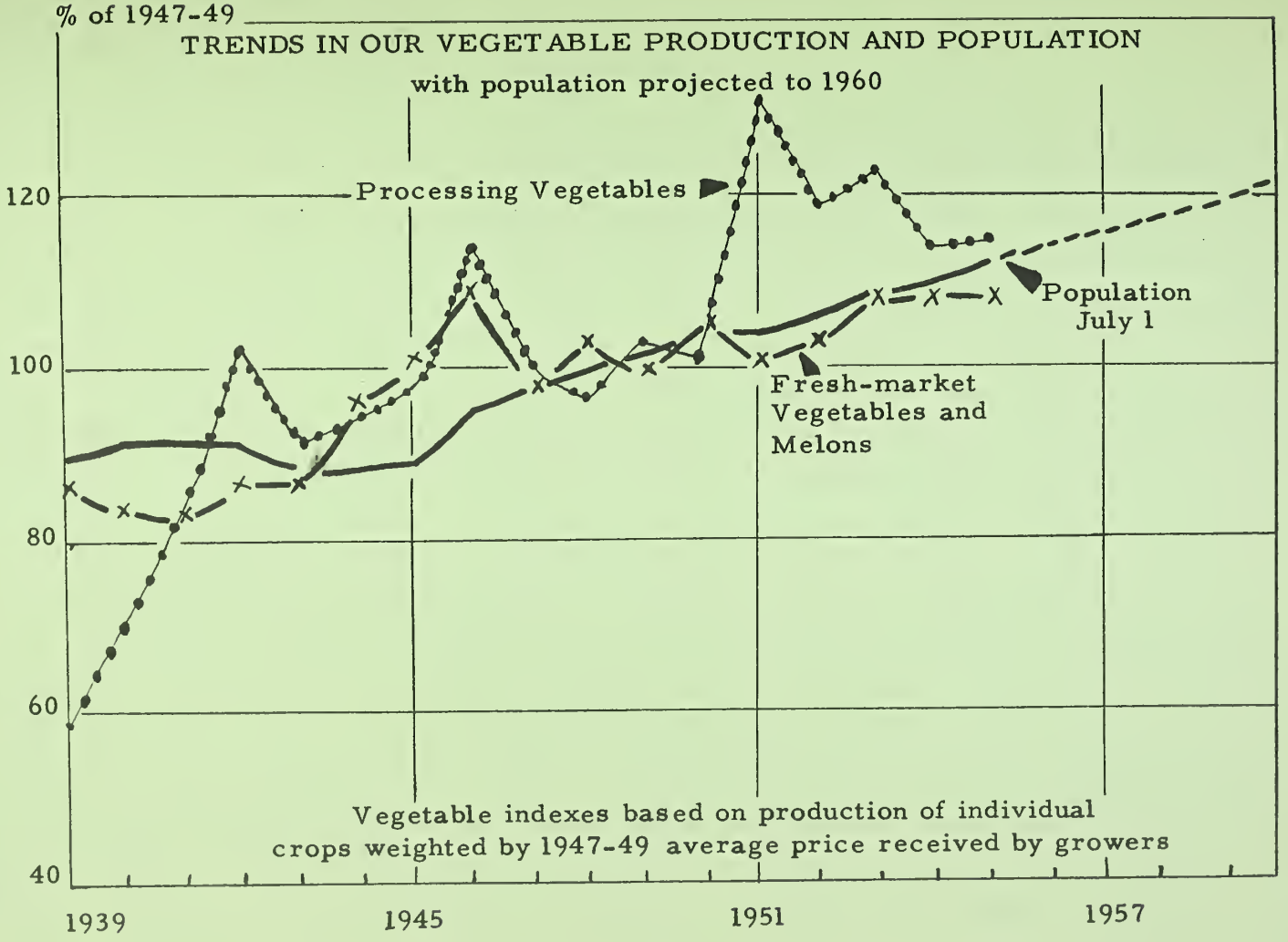
2/ At 24 cents per pound for lint cotton (after taking into account seed credit and deducting harvesting and ginning costs), 13 cents, 10 cents and six cents per pound for N, P_2O_5, and K_2O, respectively.

3/ Return per dollar spent at estimated 1954 rates of application.

4/ Reported 1953-54 average yield in these States is 338 pounds.

PRODUCTION CONSIDERATIONS

IN THE 1956 VEGETABLE OUTLOOK



Prepared for the 33rd National Outlook Conference
Nov. 28 - Dec. 1, 1955, by the Fruit and Vegetable
Statistics Branch, Agricultural Estimates Division
Agricultural Marketing Service, U. S. D. A.

PRODUCTION CONSIDERATIONS

IN THE 1956 VEGETABLE OUTLOOK

Commercial Vegetable Production Follows Population Trend

For the past 17 years, the production of commercial vegetables for fresh market and processing has followed the upward trend of population. During the next 5 years, population is expected to increase at the rate of about 2 percent per year.

Fresh Market: About two-thirds of the nation's vegetable production is grown for the fresh market. Except for 1944, 1945 and 1946, the production trend of fresh-market vegetables has followed the population trend very closely. In those three years, acreage expanded rapidly under the stimulus of war-time demands which became pronounced in 1943. The peak production of 1946 was accompanied by lower prices, and acreage was reduced sharply in 1947. Yield per acre for the fresh-market crops as a group has shown a rather steady upward trend throughout the 17-year period. Of the nine most important vegetables, cantaloups, sweet corn, lettuce, tomatoes and watermelons have shown an upward trend in fresh-market production since 1949. Snap beans and green peas have declined in importance as fresh-market commodities during this 7-year period, while the production of cabbage and onions--although variable--has shown no pronounced upward or downward trend.

Processing: The production of vegetables for commercial processing (canning and freezing) has increased at a more rapid rate than the growth in population. It has also fluctuated more widely than the production for fresh market. Tomatoes usually account for more than half and sweet corn more than one-fifth of the processing production. Hence, the year-to-year variations are largely determined by these two crops. Yield per acre for the group of 11 processing crops did not show an upward trend until after World War II. Much, but not all, of this increase in yield can be attributed to tomatoes. Processing tomato acreage increased rapidly in California during the war. Yield per acre in that State started on a phenomenal upward trend in 1946. After the war, the acreage declined in all other principal producing States except Florida. As a result, California will have about 37 percent of the acreage and 61 percent of the production of this crop in 1955.

Table 1. - All commercial vegetable production and population, 1939-55, and projected population estimates, 1956-60

Year	All Commercial Vegetables 1/						Population, July 1 4/	
	For fresh market 2/		For processing 3/		Total			
	1,000 tons	Index 1947-49 = 100	1,000 tons	Index 1947-49 = 100	1,000 tons	Index 1947-49 = 100	Millions	Index 1947-49 = 100
1939	9,621.3	86	3,435.2	59	13,056.5	80	132.7	90
1940	9,765.1	84	4,017.9	70	13,783.0	82	134.0	91
1941	9,404.4	83	5,048.4	86	14,452.8	83	133.7	91
1942	9,954.1	87	5,750.4	102	15,704.5	90	133.3	91
1943	9,780.1	87	4,983.7	92	14,763.8	88	130.6	89
1944	11,330.1	96	5,302.5	95	16,632.6	96	130.3	89
1945	11,859.8	101	5,267.5	98	17,127.3	101	130.9	89
1946	12,600.2	109	6,311.5	114	18,911.7	110	140.3	95
1947	11,262.7	98	5,549.8	100	16,812.5	98	144.6	98
1948	11,880.9	103	5,467.1	97	17,348.0	102	147.2	100
1949	11,418.3	100	5,445.6	103	16,863.9	100	149.6	102
1950	12,225.9	105	5,228.5	101	17,454.4	104	152.3	104
1951	11,595.3	101	7,215.1	131	18,810.4	107	153.2	104
1952	11,824.3	103	6,663.9	119	18,488.2	106	155.5	106
1953	12,533.1	108	6,581.4	123	19,114.5	111	158.3	108
1954	12,451.2	108	5,953.3	114	18,404.5	109	161.3	110
1955 5/	12,254.8	109	6,132.5	116	18,387.3	109	164.5	112
1956							167.2	114
1957							169.7	115
1958							172.3	117
1959							174.8	119
1960							177.4	121

1/ Includes melons. Does not include Irish potatoes, sweetpotatoes, dry edible beans or dry field peas. Indexes based on production of individual crops weighted by 1947-49 average price received by growers. 2/ Includes quantities not marketed. 3/ Asparagus, green lima beans, snap beans, beets, cabbage (sauerkraut), sweet corn, cucumbers (pickles), green peas, pimientos, spinach and tomatoes. Production of other vegetables processed included in fresh-market estimates. 4/ Total population, 1939-40. Population eating out of civilian supplies, 1941-60. Estimates from data of Federal agencies with adjustments for underenumeration. Projections, 1956-60, based on Census Series B. Source: Agricultural Marketing Service. 5/ Preliminary.

Winter and Spring Production Increase, Summer and Fall Production Decline in Relative Importance

Although the tonnage of fresh-market vegetables has increased for all seasons of the year, there have been shifts in the relative seasonal distribution during the past 17 years. The winter crops (for harvest January-March), which are grown largely in the shipping areas of Florida, California, Texas and Arizona, have increased from 13 percent to 15 percent of the annual total. The spring production (for harvest April-June) has shown an even greater relative increase--from 20 percent to 24 percent of the total. These spring crops are produced largely in the four winter-crop States, in other Southern States, in States along the Atlantic Coast and in the Pacific Northwest. The summer production (for harvest July-September) has shown an equally sharp decline--from 46 percent to 42 percent of the total. Although about one-fourth of the summer production comes from California, 39 other States grow summer vegetables on a commercial scale. The fall crops (for harvest October-December) have declined from 21 percent to 19 percent of the total. The fall production is scattered over 33 States, ranging from New York and Michigan to Florida and California. Summer and fall production, which have declined in relative importance, meet the greatest competition from home-garden supplies.

Table 2. - Production by seasons of principal commercial vegetables for fresh market, including quantities not marketed, United States, 1939-55

Year	Winter		Spring		Summer		Fall		Total
	Tons	Percent of total	Tons	Percent of total	Tons	Percent of total	Tons	Percent of total	Tons
1939	941,800	12.9	1,596,900	21.9	3,356,500	45.9	1,407,000	19.3	7,302,200
1940	893,800	12.1	1,465,700	19.8	3,496,200	47.3	1,535,700	20.8	7,391,400
1941	892,700	12.6	1,430,200	20.1	3,294,100	46.4	1,481,000	20.9	7,098,000
1942	1,161,900	15.5	1,559,800	20.8	3,268,800	43.5	1,521,000	20.2	7,511,500
1943	1,010,600	13.7	1,425,100	19.3	3,231,400	43.8	1,707,900	23.2	7,375,000
1944	1,393,600	16.1	1,730,800	19.9	3,860,200	44.5	1,691,500	19.5	8,676,100
1945	1,347,600	14.9	1,945,800	21.6	3,836,800	42.5	1,896,000	21.0	9,026,200
1946	1,364,900	14.2	2,128,800	22.2	4,180,200	43.5	1,932,800	20.1	9,606,700
1947	1,258,300	14.8	1,929,600	22.7	3,726,200	43.8	1,587,900	18.7	8,502,000
1948	1,378,700	15.4	1,897,200	21.2	3,893,100	43.4	1,790,400	20.0	8,959,400
1949	1,385,200	15.0	2,021,900	21.8	4,095,500	44.2	1,765,000	19.0	9,267,600
1950	1,553,700	15.7	2,281,800	23.0	4,194,400	42.2	1,895,800	19.1	9,925,700
1951	1,381,000	14.7	2,203,000	23.4	4,054,400	43.0	1,786,100	18.9	9,424,500
1952	1,491,400	15.5	2,212,600	23.1	4,009,500	41.8	1,885,200	19.6	9,598,700
1953	1,557,200	15.2	2,424,400	23.7	4,352,700	42.4	1,921,500	18.7	10,255,800
1954	1,552,600	15.2	2,530,000	24.7	4,275,600	41.8	1,876,500	18.3	10,234,700
1955 1/	1,461,100	14.5	2,418,200	24.0	4,366,700	43.4	1,824,600	18.1	10,070,600

1/ Preliminary.

SNAP BEAN PRODUCTION FOR PROCESSING NOW EXCEEDS FRESH MARKET PRODUCTION

SUMMARY: The production of snap beans for fresh market has declined moderately since 1949. This reduction has occurred largely in the spring and summer harvest seasons in the lower yielding States. Production during the winter and fall seasons is relatively stable. Curtailed production appears to be associated with diminishing market demand for fresh snap beans.

Production of snap beans for processing has increased subsrantially in recent years due to expanded requirements of the canning and freezing industries. Since 1953 production for processing has exceeded production for fresh market. The bulk of the processing crop is grown under contract, although in some sections processors purchase supplies on the open market.

Winter Production: Production of winter snap beans for fresh market has fluctuated but shown no definite trend in recent years. This crop is grown in Florida for harvest January through March. There is a marked downward trend in the acreage of bush beans but the acreage of high yielding pole beans has increased. This high-yielding acreage is responsible for an upward trend in yields and the maintenance of winter production at a high level. Florida is the only State where winter climate will permit the production of snap beans at this season on a commercial scale.

Spring Production: Production of snap beans for harvest from April through June has declined about 8 percenr since 1949. The decrease appears to be associated with reduced market requirements. The trend in rhe early spring States (Florida and Texas) appears to be down although production in 1955 was up sharply in Florida. A definite reduction has occurred in the mid-spring States (Louisiana, Georgia, South Carolina, Mississippi and Alabama) which produced 29 percenr fewer snap beans in 1955 than in 1949. The snap beans in these States are bush varieties grown largely without irrigation and yields are low. In the late spring States, a slight upward trend in production is noted in California where this crop is raised for marketing locally. Production is declining in Arkansas but has been about stable in North Carolina and Virginia.

Summer Production: The trend for summer snap beans is down, production having dropped about 12 percent since 1949. Much of this decline has occurred in New York but moderate reductions have taken place in many States. None of the States in this group appear to be increasing fresh-market production.

Fall Production: No definite trend in total fall production is discernible for the years 1949-55. Year-to-year changes have reflected the influence of weather on this crop. However, there has been a pronounced decline in early fall production, particularly in Virginia, South Carolina, and Louisiana. A compensating increase in this period has occurred in Florida's late fall crop.

Processing Production: Production of snap beans for processing is increasing in most States. However, production is declining in Maine, South Carolina, Arkansas and Oklahoma. While the quantity of snap beans frozen rose sharply during this period, expansion in snap beans canned accounted for most of the gain. Both acreage and yields have increased since 1949. In Oregon, where average yields are more than three times the national average, acreage has shown an upward trend since 1948 with large increases in 1954 and 1955.

Table 3. - Snap bean production, 1949-55

Year	For fresh market 1/					For processing	Total fresh and processing
	Winter	Spring	Summer	Fall	Total fresh		
	- Tons -						
1949	47,400	84,400	88,200	62,600	282,600	265,900	548,500
1950	46,400	87,600	87,000	56,100	277,100	264,600	541,700
1951	46,700	93,600	85,000	70,200	295,500	272,000	567,500
1952	40,900	77,200	82,100	51,500	251,700	238,100	489,800
1953	38,500	67,600	82,800	71,200	260,100	310,700	570,800
1954	42,500	80,700	83,300	61,600	268,100	353,030	621,100
1955 2/	45,900	77,600	77,600	65,800	266,900	297,080	564,000

1/ Includes the following quantities not marketed: Winter, 4,800 tons in 1951; Spring, 5,500 tons in 1949, 3,800 in 1950, 14,400 in 1951, 900 in 1954 and 1,000 in 1955; Summer, 900 tons in 1949, 1,000 in 1950, 900 in 1951, and 400 in 1953; Fall, 500 tons in 1949, 300 in 1950, 1,200 in 1951 and 1,800 in 1953.

2/ Preliminary.

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CABBAGE PRODUCTION RELATIVELY STABLE

SUMMARY: Annual production of cabbage for fresh market changed little in the years 1949-54. Some reduction in spring production has occurred since 1949 but this has had little effect on annual output. In 1955, a modest reduction in acreage and lower yields resulting from adverse spring and summer weather forced production to a relatively low level.

Utilization of cabbage for sauerkraut has fluctuated from 171,000 to 246,000 tons but demonstrated no definite trend in the years 1949-54.

Winter Production: In the last seven years, the production of winter cabbage has fluctuated around an average of 344,000 tons. This quantity was in excess of market requirements and an annual average of 65,000 tons could not be marketed. These losses are attributed to over-production in the winter States and competition from storage holdings of fall cabbage. Texas production is declining but this has been offset by an upward trend in Florida. In 1955, winter production declined to the lowest level since 1943 and very little abandonment occurred. Speculative growing of winter cabbage in Arizona and California is decreasing but local market demands have sustained California's production. The prospective acreage of winter cabbage for 1956 harvest is 9 percent above 1955, suggesting the possibility of an increase in production next year.

Spring Production: The production of cabbage for spring marketing has declined. Substantial reductions have occurred since 1949 in Georgia, Tennessee, Louisiana and Kentucky. Only in California, has spring cabbage production expanded. The trend toward reduced production appears to be a response to diminishing demand for fresh cabbage. Only about 5 percent of the spring crop is used for kraut.

Summer Production: Production of summer cabbage in recent years has shown little variation, ranging from about 250,000 to 270,000 tons (except 1950). No spectacular changes have occurred in individual States. Production trends are down in Iowa, Virginia, Pennsylvania, Minnesota and New Mexico, but up in Ohio and California. About one-sixth of this crop is utilized by kraut packers.

Fall Production: Production of fall cabbage remained fairly stable from 1949 through 1954, except for the unusually high production of 1950. The short crop of 1955 is the result of a reduction in acreage, and a sharp decline in yield caused by adverse weather. Since 1949 the trend in production of Danish cabbage in New York State has been up, but declining production for New York's domestic cabbage and for late fall cabbage in the Southern States was offsetting. The fall crop supplies over 75 percent of the cabbage used for sauerkraut.

Production for Sauerkraut: Utilization of cabbage for sauerkraut has varied from 171,000 to 246,000 tons in recent years. While the long-term trend is up, no definite trend is apparent for the years 1949-55. There have been no significant changes among producing States in the amount of cabbage used for sauerkraut. In recent years, about one-half of the cabbage for kraut has been contracted and the balance secured through open-market purchase.

Table 4. - Cabbage production, 1949-55

Year	For fresh market and sauerkraut 1/					Utilization			
						For sauerkraut			For fresh market
	Winter	Spring	Summer	Fall	Total	Contract	Open market	Total	
	- Tons -								
1949	323,000	207,300	248,500	543,700	1,322,500	84,000	86,900	170,900	1,151,600
1950	382,700	229,800	328,700	688,900	1,630,100	116,700	129,700	246,400	1,383,700
1951	337,300	165,100	261,200	521,800	1,285,400	100,400	74,400	174,800	1,110,600
1952	310,700	164,300	253,700	527,700	1,256,400	87,700	89,600	177,300	1,079,100
1953	378,800	209,600	272,400	597,600	1,458,400	139,750	86,650	226,400	1,232,000
1954	331,800	191,600	260,400	545,700	1,329,500	118,300	85,300	203,600	1,125,900
1955 2/	291,300	162,900	265,200	438,300	1,157,700	89,500	(3/)	(3/)	(3/)

1/ Includes the following quantities not marketed: Winter, 53,500 tons in 1949, 97,600 in 1950, 50,700 in 1951, 13,700 in 1952, 113,500 in 1953, 59,000 in 1954, and 3,500 in 1955; Spring, 6,200 tons in 1949, 6,900 in 1950, 16,900 in 1951, 1,300 in 1952, 12,700 in 1953, 14,600 in 1954 and 9,000 in 1955; Summer, 28,600 tons in 1950 and 3,900 in 1951; Fall, 1,700 tons in 1949, 141,700 in 1950, 10,000 in 1951 and 2,800 in 1954.

2/ Preliminary.

3/ Will be available December 19, 1955.

CANTALOUP PRODUCTION INCREASES IN SHIPPING AREAS

SUMMARY: Expansion in cantaloup production is occurring primarily in shipping areas of South Texas, the Yuma Area of Arizona, and the Blythe and San Joaquin Valley Areas of California. These areas have the following characteristics in common: (1) a long growing season and a warm, arid climate; (2) availability of extensive land areas that can be irrigated; (3) use of improved varieties; and (4) general use of modern marketing methods. Production is declining in the Salt River Valley in Arizona and the Imperial Valley in California due largely to economic pressure from competing areas. In other States which produce cantaloups primarily for local markets, production appears to be fairly stable. A few States in the mid-summer group have reduced cantaloup production and a moderate increase in production has occurred in some late summer States. These local-market States are handicapped by unfavorable weather for the production of quality cantaloups and lack of standardization in sizes and containers.

Spring Production: Production of spring cantaloups, which are marketed during May and June, increased sharply the past 3 years. Large-scale cantaloup production in South Texas is primarily responsible. This area markets volume supplies about 3 weeks earlier than Imperial Valley in California which dominated early season production for nearly 50 years. Handicapped by disease, high costs for "covered" early acreage, and competition from Texas and Arizona, production of cantaloups in California's Imperial Valley has declined, but increases in California's Blythe district and the Yuma Area of Arizona resulted in a moderate expansion in total spring production in the Far West. There has been a steady upward trend in Florida's small spring cantaloup production. These four States grow improved varieties, use modern marketing methods more generally, and can market volume supplies of uniform quality.

Early Summer Production: Since 1950, there has been a marked decline in production of early summer cantaloups which are marketed from about June 15 to July 31. The decline occurred in Arizona's Salt River Valley which ships its melons to Eastern markets. This downward trend is attributed to greater competition in recent years from overlapping shipments of spring cantaloups from the Yuma Area in Arizona and of mid-summer melons from the San Joaquin Valley in California. In Georgia and South Carolina, where about half of the 1955 early summer crop was grown, production has been fairly stable in recent years. Cantaloups in the latter States are grown as a cash crop. They are, for the most part, marketed locally and are sold in a mixture of containers. Climate in these States contributes to a considerable variation in cantaloup quality.

Mid-Summer Production: The mid-summer cantaloup crop is marketed largely during July and August. Increasing production in California has caused a marked upward trend in marketings for this group of States in recent years. California currently produces about 70 percent of this seasonal crop. Availability of volume supplies of uniform high quality in standardized packages for an extended period makes this area a preferred source of cantaloups. In the other mid-summer States, cantaloups are grown largely as a local-market crop and there is a lack of uniformity in quality and packaging. Production in most of these States has been fairly stable in recent years, but there has been a marked reduction in Maryland, Delaware and Washington.

Late Summer Production: This group of States markets most of their cantaloups from about August 15 to September 15. The production of late summer cantaloups reached a low point in 1950 after a decline that had lasted several years. Since that time, production has been increasing. A variety of cantaloups, which are marketed locally, are grown in these States. Quality, sizes and packaging have not been standardized.

Table 5. - Cantaloup production, 1949-55

Year	Production by Seasons 1/				Total 1/
	Spring 2/	Early summer	Mid-summer 2/	Late summer	
	- Tons -				
1949	149,000	101,200	254,200	59,200	563,600
1950	160,600	106,600	292,000	42,700	601,900
1951	166,900	96,400	270,800	43,200	577,300
1952	165,000	80,200	268,200	53,900	567,300
1953	214,000	86,300	280,900	51,800	633,000
1954	248,800	73,000	285,000	54,400	661,200
1955 3/	236,800	75,300	320,600	55,700	688,400

1/ Includes casabas, Persians, and other muskmelons; but not Honey Ball and Honey Dew melons. Includes following quantities not marketed: Early Summer, 8,300 tons in 1954; Mid-Summer, 700 tons in 1949, 800 in 1950, and 4,200 in 1951; Late Summer, 2,600 tons tons in 1949 and 2,500 in 1950.

2/ Texas cantaloup production, 1949-52, all included in Mid-summer; 1953-55 divided between Spring and Mid-summer.

3/ Preliminary.

373

SWEET CORN PRODUCTION SHOWS SPECTACULAR INCREASE IN THE WINTER, SPRING AND FALL SEASONS

SUMMARY: In recent years, there has been a spectacular increase in the production of sweet corn for fresh market in the winter, spring, and fall seasons, primarily in Florida and California. By growing hybrids, controlling insects with new insecticides, and refrigerating corn from field to terminal, commercial growers have succeeded in supplying distant markets with good quality fresh sweet corn. For many years, production of sweet corn was largely confined to the summer season in local-market areas of northern States. The volume produced during the summer months has shown little change nationally in recent years.

While production of sweet corn for processing has shown no definite trend since 1949, the level of production the last 7 years has been well above that of the 1940's.

Winter Production: In the past 7 years, there has been a spectacular increase in winter sweet corn production in Florida. This State has a national monopoly on areas where sweet corn can be matured in January, February and March and any future development will be confined to these areas.

Spring Production: Production of sweet corn for harvest during April, May and June has increased significantly since 1949. This increase is the result of a marked expansion in Florida and California which has more than offset declining production in Texas, Alabama, Georgia, and South Carolina. Because of its susceptibility to frost injury, spring sweet corn production is restricted to areas which are frost-free during the late winter and spring months. The principal advantage in spring sweet corn production enjoyed by Florida and California is the long harvest season. In these States, there are numerous areas in which the exacting climatic requirements for successful sweet corn production can be met in a succession of periods in the spring months. Harvest advances from the earliest to the latest areas as the season progresses.

Summer Production: No definite trend in U. S. summer sweet corn production has developed since 1949. However, there have been changes in several of the States producing summer sweet corn. Production has declined during this period in Virginia, Arkansas, Oklahoma, Kansas, New York, Oregon and Washington. Compensating increases have occurred in California, Connecticut, Massachusetts, New Hampshire, Pennsylvania and Michigan. Summer sweet corn is consumed largely in or near the areas where produced.

Fall Production: The production of sweet corn for fall harvest in California and Florida has tripled in the last 7 years. Production in this season is still less than 5 percent of the annual fresh market output, however. There are only a few areas in the United States where fall sweet corn production is commercially feasible.

Production for Processing: The production of sweet corn for processing increased sharply during the 1940's. Since 1949, it has fluctuated from about 1.0 million to 1.5 million tons without following a definite trend. Increasing production in Wisconsin, Minnesota, Idaho and Oregon has counterbalanced a downward trend in Maine, Ohio, Indiana, Iowa and Maryland. Although use of sweet corn by freezers has increased sharply in recent years, over 80 percent of that processed is used by canners.

Table 3. - Sweet corn production, 1949-55

Year	For fresh market 1/					For processing 2/			Total fresh and processing
	Winter	Spring	Summer	Fall	Total fresh	Freezing	Canning and other processing	Total processing	
	- Tons -								
1949	2,300	118,900	401,300	8,100	530,600	---	---	1,408,300	1,938,900
1950	6,400	151,700	413,100	11,400	582,600	---	---	958,100	1,540,700
1951	9,100	124,000	419,800	8,000	560,900	---	---	1,197,900	1,758,800
1952	20,700	149,600	406,300	10,200	586,800	---	---	1,526,100	2,112,900
1953	26,200	141,400	411,800	18,200	597,600	245,570	1,268,530	1,514,100	2,111,700
1954	40,800	155,900	398,700	27,400	622,800	212,010	1,279,090	1,491,100	2,113,900
1955 3/	25,100	179,300	430,200	23,400	658,000	(4/)	(4/)	1,178,600	1,836,600

1/ Does not include green field corn. Includes following quantities not marketed: Spring, 11,400 tons in 1950 and 4,400 in 1952; Summer, 8,200 tons in 1949, 8,700 in 1950 and 6,800 in 1951.

2/ Separate estimates of freezing and canning not available prior to 1953.

3/ Preliminary.

4/ Will be available December 19, 1955.

377

LETTUCE PRODUCTION INCREASES SINCE 1949, BUT RELATIVELY STABLE LAST FOUR YEARS

SUMMARY: Although the annual production of lettuce has increased about 15 percent since 1949, output the past 4 years has been relatively stable. The proportion of the crop grown in the three major States of California, Arizona, and Texas has remained unchanged during this period at about 85 percent. In this group of States, California has increased production about 17 percent since 1949, and Texas has more than tripled production, but Arizona's output has declined. Other States where production has increased significantly are Florida and New Jersey. In Oregon and Idaho, lettuce production has declined. Production in remaining States has shown little change. The development of lettuce varieties more tolerant of warm weather has not brought about a marked increase in lettuce production in North Central and Northeastern States. There is, however, increasing interest in this commodity in these areas.

Winter Production: The increase in production of winter lettuce has averaged about 3 percent a year since 1949. The upward trend in Texas, California, and Florida has more than offset a decline in Arizona. These States have the only areas in the Nation where field-grown lettuce can be matured successfully during the winter. Any future changes in domestic production will be confined to these areas. Market demand appears to be the only factor to which increased production can be attributed.

Spring Production: In recent years, no definite trend in production of spring lettuce is discernible. Year to year fluctuations in the early spring group, dominated by Arizona and California, are due largely to the effect of weather on yields. Adverse spring weather frequently retards lettuce growth causing an excessive acreage to mature in a short period late in the harvest season. During these periods of "bunching," maturing fields cannot be completely harvested. There has been a modest upward trend in late spring lettuce in New Jersey, but in other States, production appears to be relatively stable. All of the spring States except Arizona and California produce lettuce primarily for sale in local markets. Apparently, the principal factor inhibiting expansion in these local-market States is the heavy production in Arizona and California where 75 percent of the spring crop is grown.

Summer Production: Production of summer lettuce has shown a marked upward trend in recent years. The increase has occurred in California which provides about three-fourths of this production. Production in other States has not shown any significant change. In recent years, there has been some interest in growing summer lettuce in the North Central States. Such a development may be feasible using heat tolerant strains of Great Lakes lettuce. However, production in these States is not yet important.

Fall Production: Production of lettuce for marketing during the fall season has increased nearly one-fifth since 1949. Expansion in California, Texas and New Jersey accounts for most of the increase. Production in Oregon and Idaho has declined because of competition from more favorably located areas. Fall lettuce is a comparatively new crop in the Panhandle area of Texas. Contrary to expectations, development of this area has not resulted in a decline in California production. California still accounts for slightly more than three-fifths of the fall crop. Arizona, where fall production has been fairly stable, produces about one-fifth of the fall lettuce.

Table 7. - Lettuce production, 1949-55

Year	Production by Seasons 1/				Total
	Winter	Spring	Summer	Fall	
	- Tons -				
1949	342,200	280,400	286,700	309,200	1,218,500
1950	360,200	331,700	308,200	328,700	1,328,800
1951	328,300	333,200	281,400	325,200	1,268,100
1952	370,200	310,900	331,000	384,800	1,396,900
1953	376,900	333,900	347,700	347,500	1,406,000
1954	396,400	317,600	349,900	362,300	1,426,200
1955 2/	406,400	308,900	327,600	394,200	1,437,100

1/ Includes following quantities not marketed: Winter, 27,000 tons in 1950 and 3,000 in 1951; Spring, 5,700 tons in 1949, 2,600 in 1951, 3,000 in 1953 and 1,100 in 1954; Summer, 11,200 tons in 1949, 24,100 in 1950, 2,600 in 1951, 4,200 in 1953 and 7,000 in 1954; Fall, 15,300 tons in 1949, 11,100 in 1950, 6,800 in 1952, 1,600 in 1953 and 2,400 in 1954.

2/ Preliminary.

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ONION ACREAGE DECLINES WHILE YIELD PER ACRE INCREASES

SUMMARY: Onion production during the last 7 years has ranged from 38.8 to 49.8 million sacks with no definite trend. However, average annual onion production in 1949-55 was 42.5 million sacks compared to the 1939-48 average of 38.6 million sacks. Increases during this 17-year period occurred in the early spring, late spring and late summer seasons. The expanding production is the result of increasing yields on an acreage which is following a downward trend. There is a tendency for onion culture in all areas to be concentrated on the better lands and growers are employing improved onion strains and more fertilizer, dusts and sprays to expand their operations vertically. Marketing practices have had a tendency to discourage the production of onions by small growers and the industry is becoming dominated by larger growers.

Early Spring Production: Since 1949, the production of early onions in South Texas has increased to the extent that marketings have exceeded 4.2 million sacks in each of the last 4 years. This increase is associated with rising yields resulting from the widespread use of hybrid seed and expansion of irrigated acreage. A by-product of these changes in cultural practices has been the earlier maturity of the crop. March and April marketings have been increasing while both the proportion and the quantity of the crop moved in May have declined. If growers carry out intentions to plant, the acreage planted for 1956 harvest will exceed that of 1955 by 60 percent.

Late Spring Production: Production of late spring onions has increased since the 1940's and marketings in 1950-55 have ranged from about 4.0 million to 4.9 million sacks. Since 1949, Arizona is the only late spring State in which onion production has shown a definite increase. Late spring production in California and Texas has fluctuated from year to year with declines in one frequently offsetting increases in the other. In Texas, a decline in non-irrigated production around Dallas and Ft. Worth has been offset by an increase in onions grown under irrigation in the Panhandle. This development has reduced May and June marketings but resulted in a rise in July marketings from Texas. Except for 1953, production in Georgia has remained at a modest level.

Early Summer Production: Since 1949, the production of early summer onions has remained fairly stable. Production in individual States has fluctuated but demonstrated no definite trend. The short marketing season for early summer onions, which centers on July, overlaps the end of the late spring season and beginning of the late summer season, thereby placing this group in a poor competitive position in many years.

Late Summer Production: The production of late summer onions in 1949-55 averaged 32.4 million sacks compared to the 1939-48 average of 29.6 million sacks. No definite production trend in 1949-55 is discernible, but in this period, acreage has declined about 17 percent while yields have followed an upward trend. Increasing average yields, which reached a record high of 601 sacks in 1953, are the result of improved farming and concentration of acreage on more productive land. In the Eastern States, increasing production in New York has more than offset the decline in Massachusetts. In the Central States, production has declined in Indiana, Illinois, and Minnesota, but has increased in Michigan. The most marked change in the Western States occurred in Colorado where 1955 production is about 47 percent below that of 1949. Since 1951, production there has been stabilized at about 3.0 million sacks. Utah production has also declined. These reductions have been partially offset by increased production for dehydration in California, and increased fresh-market production in Malheur County, Oregon, and in the Columbia Basin of Washington. Late summer onions, which are marketed through the fall, winter and early spring months, have been subjected to increasing competition from expansion in early season marketings of new crop onions from Texas.

Table 8. - Onion production and January 1 stocks, crop years 1949-55

Crop Year	Production 1/					January 1 Stocks		
	Early Spring	Late Spring	Early Summer	Late Summer	Total production	In common storage 2/	In cold storage	Total stocks
	- 1,000 sacks (50 lbs.) -							
1949	2,672	3,620	1,533	30,959	38,784	7,261	2,291	9,552
1950	3,884	4,919	1,686	35,308	45,797	10,131	1,323	11,454
1951	2,024	4,638	1,627	31,078	39,367	6,780	1,389	8,169
1952	4,268	4,107	1,751	29,678	39,804	6,309	1,239	7,548
1953	5,592	5,769	1,968	36,518	49,847	11,213	1,179	12,392
1954	4,345	3,992	1,559	33,645	43,541	8,942	1,032	9,974
1955 3/	4,700	4,210	1,562	29,628	40,100	(4/)	(5/)	(4/)

1/ Mostly for fresh market but includes production for processing and for dehydration. Includes following quantities not harvested: Early Spring, 376,000 sacks in 1950 and 1,165,000 in 1953; Late Spring, 560,000 sacks in 1951 and 1,382,000 in 1953; Early Summer, 80,000 sacks in 1953; Late Summer, 962,000 sacks in 1950 and 100,000 in 1953.

2/ Held by growers and dealers in the Late Summer States.

3/ Preliminary.

4/ Will be available January 19, 1956.

5/ Will be available January 16, 1956.

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FRESH-MARKET GREEN PEAS VIRTUALLY DISAPPEAR AS PRODUCTION FOR FREEZING EXPANDS SEVENFOLD

SUMMARY: In the last 16 years, the production of peas for fresh use has virtually disappeared as a commercial enterprise. During the same period the production for freezing increased about sevenfold. Production for canning expanded during World War II, but has shown no pronounced trend in the last 7 years.

Fresh Market Production: During the last seven years, the production of green peas for the fresh market continued the downward trend that started in 1940. Competition from frozen and canned peas has reduced the fresh market product to an item of negligible importance. Production in all four seasons of the year has declined. Today, Texas is the only State producing a commercial winter crop; California and South Carolina, early spring crops; Idaho and Washington, late spring crops; New York, Colorado and Washington, summer crops; and California, an early fall crop. In 1954, the production of fresh-market peas amounted to only 5 percent of the total annual production on an "as-sold" basis, and 2 percent of the total on an "equivalent'shelled" basis.

Processing Production: Production of peas for freezing increased rather steadily from 17,500 tons in 1939 to a peak of 129,200 tons in 1953. During the last 3 years, the proportion frozen has remained very steady at 28-29 percent of the total production for processing. Production for canning and other processing increased during World War II, reaching a peak of 439,010 tons in 1945. In the last 7 years, it has varied from 273,150 tons in 1949 to 391,840 tons in 1951, with no marked trend. The national yield per acre for the total crop, although quite variable, has remained on a rather even keel. During the last 7 years, the acreages in Wisconsin, New York and Pennsylvania have remained relatively stable at levels below their World War II peaks. However, in Washington, Oregon, Idaho and Minnesota the acreage of this crop has continued to expand in recent years. This uptrend is associated with the expansion in the frozen product. In 1955, these 4 States accounted for two-thirds of the national total of 125,000 tons for freezing.

Table 9. - Green pea production, 1949-55

Year	For fresh market 1/					For processing 1/			Total fresh and processing 1/
	Winter	Spring	Summer	Fall	Total fresh	Freezing	Canning and other processing	Total processing	
	- Tons -								
1949	3,500	22,800	11,800	6,600	44,700	74,240	273,150	347,390	392,100
1950	2,700	22,500	8,500	6,100	39,800	97,450	335,540	432,990	472,800
1951	2,200	17,800	6,900	3,800	30,700	120,620	391,840	512,460	543,200
1952	1,200	15,600	7,600	3,500	27,900	118,190	314,200	432,390	460,300
1953	1,400	10,600	5,000	4,100	21,100	129,200	335,350	464,550	485,700
1954	900	11,800	4,500	4,300	21,500	117,280	282,850	400,130	421,600
1955 2/	400	11,100	4,700	3,400	19,600	125,000	321,670	446,670	466,300

1/ Fresh-market production on an in-the-shell basis; processing production on a shelled basis. 2½ pounds of peas in the shell produce approximately 1 pound of shelled peas.

2/ Preliminary.

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TOMATO PRODUCTION FOR FRESH MARKET INCREASING BUT PROCESSING PRODUCTION SHOWS NO PRONOUNCED TREND DESPITE UPSURGE IN YIELD PER ACRE

SUMMARY: Production of tomatoes for fresh market has shown an upward trend during 1949 to 1955. This is the result of increased production in the winter, spring and fall seasons. The crop for summer harvest has remained relatively stable, despite shifts between producing areas. Production for processing reached an all-time high in 1951 but shows no definite trend for the 7-year period. However, there is a marked upward trend in the yield per acre of the processing crop.

Winter Production: Although year-to-year fluctuations have been erratic, production of winter tomatoes in Florida has registered an increase since 1949. Expansion has occurred largely in Dade County, where about 85 percent of the 1954 winter crop was produced. Southern Florida is the only area in the United States where volume supplies of field-grown tomatoes can be matured during January, February and March.

Spring Production: In recent years, the production of tomatoes for harvest during the spring season (April through June) has increased. There has been a marked expansion in Florida during this period and South Carolina and Georgia have become more important producers of this crop. These increases have been partially offset by declining production in Texas, particularly in the late-spring areas of East Texas, where drought has damaged tomatoes in recent years. The increase in production in Florida has resulted in heavier marketings of tomatoes during April from domestic sources.

Summer Production: Although United States production of summer tomatoes has been stable since 1949, there have been significant trends in some States. California, the most important State in this group, has increased production about 50 percent in this period. Virginia and Connecticut also show increases. Despite their proximity to population centers, producing areas in other States are harvesting fewer tomatoes than in 1949. Declines in fresh-market production in Arkansas, Tennessee, Kentucky, Illinois, Missouri, Maryland, New Jersey, Washington, Oregon, Indiana, Massachusetts, New York and Colorado have offset the increases in California, Virginia and Connecticut.

Fall Production: The production of tomatoes for fall harvest (October through December) has shown a fairly steady upward trend the last 7 years. This is the result of increased yields per acre in the central valleys and coastal areas of California, and increased acreage in the central and southern areas of Florida. In south Texas, where yields per acre are low, the acreage and production have declined. California produced about 70 percent of the nation's fall tomato crop in 1954.

Processing Production: During the last 7 years, the nation's production of tomatoes for processing has varied from the all-time high of 4.3 million tons in 1951 to 2.5 million tons in 1949. The acreage has fluctuated considerably during this period but the general trend has been downward since 1951. Yield per acre has shown a sharp increase, a continuation of the upward trend that started in 1946. The latter is the result of a phenomenal uptrend in yield in California coupled with a decline in acreage in other States with lower yields. The upsurge in yields in California is attributed largely to an increase in the number of plants per acre, the use of improved varieties and a shift of the tomato acreage to better land. Yields have also shown a definite uptrend in Illinois, Indiana, and Ohio, and some tendency in that direction in New York and New Jersey. However, since World War II, acreage has declined in all of the principal producing States except California and Florida. In 1955, California will have more than one-third of the acreage and nearly two-thirds of the processing tomato production.

Table 10. - Tomato production, 1949-55

Year	For fresh market 1/					For processing	Total fresh and processing
	Winter	Spring	Summer	Fall	Total fresh		
	- Tons -						
1949	62,900	258,100	408,600	159,800	889,400	2,478,200	3,367,600
1950	83,800	242,700	388,200	167,000	881,700	2,643,200	3,524,900
1951	56,400	269,700	407,100	181,400	914,600	4,267,100	5,181,700
1952	79,400	255,600	396,200	183,000	914,200	3,523,400	4,437,600
1953	65,300	248,300	415,500	188,800	917,900	3,234,900	4,152,800
1954	96,800	274,100	397,200	221,100	989,200	2,688,560	3,677,800
1955 2/	129,800	299,000	395,700	243,700	1,068,200	3,218,630	4,286,800

1/ Includes the following quantities not marketed: Spring, 5,100 tons in 1954 and 100 tons in 1955; Summer, 5,300 tons in 1949 and 2,900 in 1951.

2/ Preliminary.

385

WATERMELON ACREAGE INCREASING

SUMMARY: From 1949 through 1952, total production of watermelons in the United States did not change significantly. Since 1952, however, production has been increasing at a considerable rate. This increase is associated with an uptrend in acreage rather than any significant change in yield. Contributing factors to this uptrend are: (1) the planting of more acreage in Florida, particularly for the early market, and (2) the additional acreage available in summer States where acreage reductions have occurred for other crops in control programs.

Late Spring Production: Since 1949, the production of late spring watermelons has trended upward, irregularly but sharply, averaging about 15 percent per year. This trend is more closely related to acreage increases, inasmuch as yields have fluctuated within a comparatively narrow range. Expansion in acreage for harvest has been most pronounced in Florida, where additional plantings have been made in new areas as well as in some of the older producing sections. The Florida and California crops have normally constituted all United States marketings in April, virtually all in May, and a considerable portion in June. In recent years, marketings (particularly from Florida) have increased sharply in all 3 months with June production in competition with early season supplies from some of the early summer States. This has posed a serious marketing problem the past 2 years. Some 8 percent of the crop in these 2 years could not find a market. This excess in production is due, in large measure, to too much acreage in Florida since most of the California crop has been going to local markets.

Early Summer Production: During 1949-54, considerable year-to-year fluctuations occurred in early summer production, but there was no definite trend in either direction. Yields for these States during the same period averaged close to the 1949 level. This suggests that weather conditions and market demand probably had a more direct bearing upon yield during the 1949-54 period than did any great change in technological methods. The preliminary estimate of the 1955 crop, however, is at a level 24 percent above the 1949-54 average. Yields were higher than usual, and acreage continued upward, a trend which started in 1953. This recent trend in increased acreage has been more pronounced in some of the southeastern States, where additional land has become available as a result of curtailed acreage of other crops subject to acreage control. Growers in this general area experienced poor market conditions this year, which suggests that the 1955 level of production is too high in these States--particularly Georgia, the Carolinas, and Mississippi. In Texas, which normally accounts for a considerable portion of early summer acreage, no definite trend in acreage is apparent since 1949.

Late Summer Production: Production in the late summer States has trended upward since 1951 with the total crop in 1955 an estimated 30 percent above 1949. However, the 1955 late summer crop at 8 percent of total United States production is no greater relative to the United States crop than in 1949. It appears that market demand has supported production in these States reasonably well since 1949. The uptrend in production is due partly to additional acreage, which has been increasing irregularly, but at an average rate of 3-4 percent per year. Some producers have utilized acres diverted from other crops as a result of control programs. Average yield per acre during 1949-55 is about 4 percent above that realized in 1949. In addition, it appears that returns per acre have been favorable compared to alternative opportunities. The ice-box melon, which has received some commercial attention on the Del-Mar-Va peninsula, comprises only a small portion of total melon production. Its principal advantage to date appears to be its earlier maturity, which enables it to reach market some 3 to 4 weeks ahead of the peak summer movement.

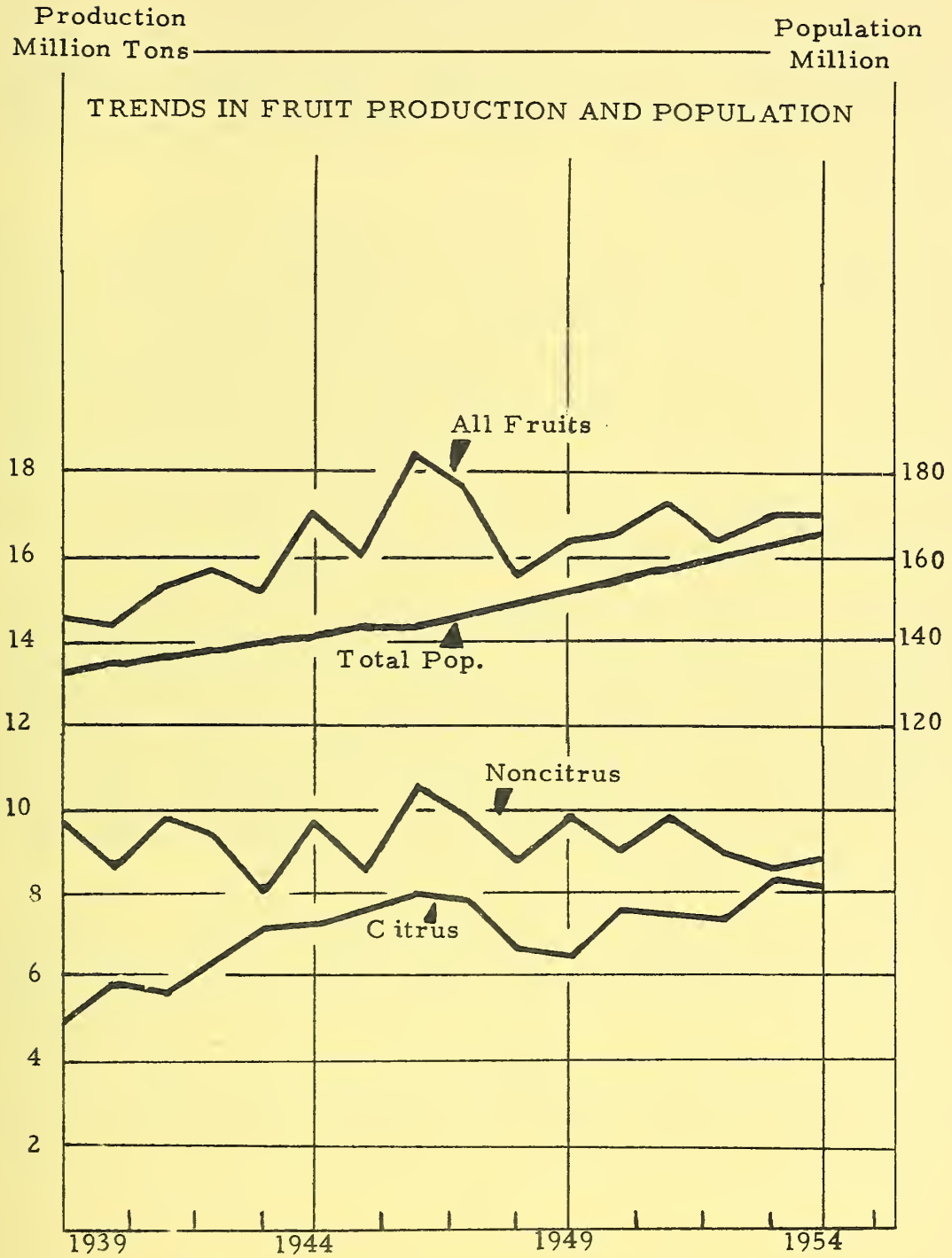
Table 11. - Watermelon production, 1949-55

Year	Production by Seasons 1/			Total
	Late Spring	Early Summer	Late Summer	
	- Tons -			
1949	248,400	869,800	98,100	1,216,300
1950	328,300	788,100	88,400	1,204,800
1951	304,900	848,200	88,800	1,241,900
1952	345,500	776,500	105,400	1,227,400
1953	407,000	855,100	111,900	1,374,000
1954	488,500	865,500	132,400	1,486,400
1955 2/	471,700	1,031,700	127,400	1,630,800

1/ Includes following quantities not marketed: Late Spring, 69,200 tons in 1950, 36,900 in 1954 and 39,900 tons in 1955; Early Summer, 3,800 tons in 1949, 25,000 in 1950, 6,200 in 1953, and 12,500 in 1954.

2/ Preliminary.

PRODUCTION CONSIDERATIONS IN THE 1956 FRUIT AND TREE NUT OUTLOOK



Prepared for the 33rd National Outlook Conference, Nov. 28 - Dec. 1, 1955, by the Fruit and Vegetable Statistics Branch, Agricultural Estimates Division, U.S. Agricultural Marketing Service, U. S. D. A.

PRODUCTION CONSIDERATIONS IN THE 1956 OUTLOOK FOR FRUITS AND TREE NUTS

The level of total fruit production in the United States has increased about 17 percent during the past 15 years, while population during this period has increased about 24 percent. This means that per capita production of fruits has been declining for several years despite higher consumer purchasing power.

The total production of citrus fruits has increased 70 percent since 1939, despite severe freeze damage in several producing areas during this period. This upward trend in citrus production is expected to continue for several years but at a slower rate of increase. Florida continues to expand in bearing capacity, both from new plantings and increasing size of trees. The trend in California oranges and grapefruit is moderately downward and for lemons, about level. Texas citrus trees of all kinds were nearly wiped out in February 1951. The level of production was reduced from about 30 million boxes to less than 1 million but has been reviving since the freeze, reaching 4 million boxes in 1954-55. Texas production should continue to increase for several years. Arizona citrus production probably will not change materially for at least a few years.

Fresh sales of citrus fruits increased steadily from about the turn of the century until the period from 1943 to 1946. Since 1946, total fresh sales of citrus have declined moderately and are now at about the same level as in 1939. Processing of citrus fruits, on the other hand, has continued to increase steadily and the level is now about four times that of 1939. Until about 10 years ago, canned single strength juice was the principal product, but in recent years frozen concentrated orange juice has become the most important citrus product. Frozen concentrated orange juice now accounts for more than a third of all oranges produced in the country and about two-thirds of all oranges processed.

The level of noncitrus fruit production is about the same as it was 15 years ago. Total noncitrus fruits probably will remain at approximately this level for the next few years. Lower levels since 1939 for apples, peaches, prunes, and figs have been offset by increases in pears, grapes, cherries, and cranberries. Apricots, plums, strawberries, and olives are at about the same level of production as 15 years ago. Fresh sales of noncitrus fruits have declined moderately since 1939 while total processing increased about the same amount. Increases in canning and freezing during

this period were about offset by a decline in dried fruits. The production of other processed products--principally vinegar, wine, and jelly--is at about the same level as in 1939.

Total tree-nut production (almonds, walnuts, filberts, and pecans) has increased about 40 percent during the past 15 years, with increases in each of the 4 major kinds. The trend should continue upward for almonds and walnuts for a few years but probably has leveled off for filberts and pecans.

Oranges: The trend in orange production has been upward for 50 years and will probably continue upward for several years but at a slower rate of increase. Production of oranges in the United States is now in greater volume than for any other fruit crop. More than half of the United States production is processed. The production of frozen concentrated orange juice is probably the outstanding development in the United States fruit industry in recent years. The packing of this product on a commercial scale started only about 10 years ago. However, it increased so rapidly that in the past two seasons more than a third of the United States orange crop was used for frozen concentrate. Nearly all of this product has been made in Florida.

Production in Florida for most kinds of oranges continues sharply upward. In California, the production trend has turned moderately downward for both navels and Valencias. California Valencias are essentially the only fresh oranges available during the summer and early fall. This has been a great advantage to California in marketing her Valencia crop. This advantage has been sharply reduced by the competition of frozen orange concentrate from Florida. The pressure of this competition will probably increase as Florida production increases. Many California citrus groves are giving way to the expanding cities and towns, especially in Southern California. Arizona orange production probably will not change materially in the next few years. The Texas production will be relatively small for a few years because of severe freeze damage in 1949 and 1951.

Grapefruit: The production of grapefruit in the United States increased rapidly from 1939 until 1949 when the upward trend was halted by a freeze in Texas. Another Texas freeze in 1951 killed most of the trees. Texas production is expected to increase in the future. The trend in Florida grapefruit will probably continue moderately upward for several years.

Lemons: The level of lemon production has not changed significantly during the past 15 years. A slight to moderate increase is possible in the next few years, since the increase in population should increase the demand for fresh lemons as well as the new processed products such as frozen lemonade concentrate.

Apples: Apples account for about a third of the noncitrus fruit total and provide almost half the fresh market supplies of domestic noncitrus fruit. The production trend for apples has been moderately downward since 1939, and appears to be leveling off at 15 to 20 percent below the production potential of 1939. Sales of nursery stock are reported to have been large during the past 2 years. The decline in apple production has been accounted for mostly by the removal of low yielding orchards and less desirable varieties. Despite the downtrend in production, processing has been increasing, particularly the canning of applesauce in the East.

The production of apples in New England has increased moderately since 1939, in contrast with moderate to sharp declines for all other important producing areas of the East. New York is down about a fifth and the Appalachian area (Pennsylvania, Maryland, Virginia, West Virginia) is down about a fourth. These areas have probably leveled off in production.

Michigan production has fluctuated between 5 and 12 million bushels since 1939 but production capacity has declined only slightly. This trend is expected to hold about level or increase moderately during the next few years. The total production level for the other Central States is down about a third with considerable variation among the States.

Washington State produced a record crop of 35½ million bushels in 1950. The following four crops were each less than 25 million bushels but the 1955 crop is estimated at 31 million. Production capacity in this State declined moderately between 1939 and 1943 but has been increasing since 1943 and is now about the same as in 1939. This slight upward trend is expected to continue during the next few years.

California apple production increased from 1939 to 1947 when a record crop of 11 million bushels was produced. The tend has leveled off moderately below the peak of 1947 and is expected to hold about steady for a few years. Each of the other Western States shows a decline since 1939 and a slight to moderate decline can be expected for the next few years.

Peaches: Peaches are exceeded in importance only by apples and grapes among noncitrus fruits. Fresh sales of peaches amount to about half of production and are second only to fresh apple sales in tonnage. Production increased sharply from 1939 until 1946 and has since declined to a level slightly below that of 1939. In the spring of 1955, a disastrous freeze in the Southern States practically wiped out the 1955 peach crop in those States and killed or damaged a great many peach trees. The production capacity in these States will be reduced for at least 2 or 3 years.

The potential level of production in California, where about one-half of the United States total peaches are grown, has increased moderately during the past 10 years. About two-thirds of the peaches produced in California have been clingstones used principally for canning. In order to hold production of clingstones within the limits of market requirements, California growers have put into operation a "green drop" program in recent years of large production. This program, which is operated as part of a marketing agreement, has resulted in the elimination of about 15 percent of production by stripping the green fruit from the trees early in the season.

The production level in the important Western States of Colorado, Washington, and Oregon increased between 1939 and 1946 but has not changed significantly during the past 10 years. No important changes are expected in these States during the coming few years except some possible expansion in the Grand Coulee Project of Washington.

Production trends in nearly all areas of the Northeastern and North Central States have been moderately downward except in New Jersey, which has shown a moderate increase.

The Southeastern and South Central States have been decreasing in production levels at rates from moderate to rapid. The 1955 freeze in these States will no doubt accelerate the downtrend--at least temporarily.

Pears: Pear production increased moderately between 1939 and 1947 and has since declined to about the same level as in 1939. The three Pacific Coast States moduce more than four-fifths of the Nation's pears and the proportion is increasing. Little change is expected during the next few years in overall pear production. The pear crops in California and Oregon have increased about 50 percent since 1939, while the Washington crop has not changed significantly. The increases in California and Oregon have been offset by decreases in nearly all Eastern and Central States. Fire blight has been a serious threat to pear trees for many years in nearly all areas of the country. The Western States have been able to keep the blight under control but damage in the Eastern and Central States has been severe. Some of the new treatments, especially antibiotics, show promise of controlling blight.

Grapes: The level of grape production in the United States increased about a fourth between 1939 and 1951. Since 1951, the trend apparently has turned downward. California continues to produce about nine-tenths of the United States total grapes. All three classes of California grapes (wine, table, and raisin) show about the same trend pattern since 1939--an increase between 1939 and 1951 and a moderate decline since 1951.

Grape production in Washington has increased steadily for more than 20 years and is now exceeded only by California and New York. The present level is more than four times as large as it was 15 years ago. This upward trend will probably continue for a few years. Production in the Great Lakes States varies widely from year to year from the effects of weather but the trend has been upward since 1939.

Cherries: The trend in production of sweet cherries was sharply upward until 1949 and has not changed significantly since. Little change is expected in the near future.

The production potential for sour cherries has increased steadily in the past 16 years and is now about 50 percent higher than in 1939. Actual production has fluctuated widely from year to year because of damage from freezes, frosts, and storms. The biggest crop to date was in 1951 when about 158,000 tons were harvested, including 8,700 tons which were not utilized because of low prices. In 1952, 1953, and 1954, production ranged from 108,000 to 132,000 tons but in 1955 again reached the 150,000-ton mark.

Production is expected to trend moderately upward for several years because of extensive recent plantings in Michigan and New York.

Plums: Plums are estimated only for California and Michigan. California produces more than nine-tenths of the total. The production level is moderately higher than in 1939. Very little change is expected in the near future.

Prunes: Production has declined about a fourth since 1939 but is expected to change very little in the next few years. Sharp drops occurred in Washington, Oregon, and California. The level in Idaho changed very little but Idaho accounts for only about 5 percent of the total production. Practically all of the California prunes are dried while most of the prunes in Washington, Oregon, and Idaho are sold fresh or canned.

Apricots: The level of apricot production has declined about a fourth since 1939. This decline is expected to continue for some time but at a slower rate. California produces about nine-tenths of the United States crop. From a fourth to a third of the crop is dried--all in California.

Cranberries: Cranberry production has trended upward since 1939. This trend probably will continue for a few years. Processing is the most important factor in the increase of cranberry production. Prior to 1934, processing was not important, but this utilization has since

expanded rapidly and now accounts for more than half of the production. The marketing season is extended throughout the year by the canned pack of cranberry products. Massachusetts has consistently produced more than half of the United States crop but the proportion of production in Massachusetts is decreasing as Wisconsin, Washington, and Oregon become more important producers. New Jersey holds at about the same level. Wisconsin has more than doubled in production since 1939 while Washington and Oregon crops are about 5 times as large as in 1939.

Fruits and Tree Nuts: Production and Per Capita Production, United States, 1939-1954

Year	Total Citrus 1/		Total Noncitrus 2/	
	Production	Per Capita 4/	Production	Per Capita 4/
	1,000 tons	Pounds	1,000 tons	Pounds
1939	4,776	72	9,698	146
1940	5,662	85	8,628	129
1941	5,521	83	9,680	145
1942	6,302	95	9,282	139
1943	7,089	109	7,971	122
1944	7,233	111	9,683	149
1945	7,466	114	8,489	130
1946	7,861	112	10,531	150
1947	7,792	108	9,838	136
1948	6,636	90	8,764	119
1949	6,479	87	9,761	130
1950	7,538	99	8,967	118
1951	7,368	96	9,816	128
1952	7,338	94	8,962	115
1953	8,220	104	8,636	109
1954	8,053	100	8,815	109

Year	Total Fruits		Total Tree Nuts 3/	
	Production	Per Capita 4/	Production	Per Capita 4/
	1,000 tons	Pounds	1,000 tons	Pounds
1939	14,474	218	144	2.2
1940	14,290	213	130	1.9
1941	15,201	227	147	2.2
1942	15,584	234	136	2.0
1943	15,060	231	158	2.4
1944	16,916	260	182	2.8
1945	15,955	244	177	2.7
1946	18,392	262	165	2.4
1947	17,630	244	170	2.4
1948	15,400	209	201	2.7
1949	16,240	217	204	2.7
1950	16,505	217	170	2.2
1951	17,184	224	204	2.7
1952	16,300	210	206	2.6
1953	16,856	213	209	2.6
1954	16,868	209	172	2.1

1/ Citrus fruit total includes oranges, tangerines, grapefruit, lemons, limes. The season for citrus fruits begins with the bloom of the year shown and ends with the completion of harvest the following year.

2/ Noncitrus fruit total includes apples (commercial)peaches, pears, grapes, cherries, plums, prunes, apricots, figs, olives, avocados, cranberries, strawberries.

3/ Tree nut total includes almonds, walnuts, filberts, pecans.

4/ Per capita production based on total population July 1 for years 1939-40, population eating out of civilian supplies, 1941-54. Estimates from data of Federal agencies with adjustments for under-enumeration.

Citrus Fruits and Tree Nuts: Production, by Kinds, United States, 1939-1954

Year	Oranges (including Tangerines)	Grapefruit	Lemons	Limes	Total citrus	Total fruits
			- 1,000 tons -			
1939	2,958	1,359	455	4	4,776	14,474
1940	3,335	1,669	655	3	5,662	14,290
1941	3,488	1,564	463	6	5,521	15,201
1942	3,728	1,979	588	7	6,302	15,584
1943	4,455	2,191	436	7	7,089	15,060
1944	4,693	2,034	496	10	7,233	16,916
1945	4,402	2,485	571	8	7,466	15,955
1946	4,979	2,330	545	7	7,861	18,392
1947	4,850	2,427	508	7	7,792	17,630
1948	4,440	1,793	395	8	6,636	15,400
1949	4,603	1,417	449	10	6,479	16,240
1950	5,175	1,821	531	11	7,538	16,505
1951	5,262	1,590	506	10	7,368	17,184
1952	5,323	1,506	497	12	7,338	16,300
1953	5,670	1,898	637	15	8,220	16,856
1954	5,833	1,652	553	15	8,053	16,868

Year	Almonds	Walnuts	Filberts	Pecans	4 Nuts
			- 1,000 tons -		
1939	29	62	4	49	144
1940	15	51	3	61	130
1941	10	70	6	61	147
1942	32	61	4	39	136
1943	20	64	7	67	158
1944	32	72	7	71	182
1945	32	71	5	69	177
1946	47	72	8	38	165
1947	36	65	9	60	170
1948	36	71	6	88	201
1949	43	88	11	62	204
1950	38	64	7	61	170
1951	43	77	7	77	204
1952	36	84	12	74	206
1953	39	59	5	106	209
1954	43	75	9	45	172

Noncitrus Fruits: Production by Kinds, United States, 1939-54

Year	Apples (Com'l)	Peaches	Pears	Grapes	Cherries	Plums	Prunes
				- 1,000 tons -			
1939	3,342	1,541	721	2,449	184	77	673
1940	2,674	1,388	730	2,466	173	74	543
1941	2,933	1,809	719	2,725	162	77	583
1942	3,041	1,601	746	2,396	197	76	542
1943	2,095	1,026	593	2,965	116	78	625
1944	2,910	1,874	766	2,696	196	96	507
1945	1,600	1,902	799	2,767	148	73	711
1946	2,854	1,988	823	3,137	228	106	688
1947	2,709	1,834	837	3,020	171	79	594
1948	2,144	1,455	614	3,061	213	72	544
1949	3,216	1,660	835	2,623	245	99	536
1950	2,988	1,215	719	2,688	239	84	418
1951	2,656	1,527	736	3,390	230	102	538
1952	2,220	1,501	758	3,164	218	61	423
1953	2,239	1,547	715	2,700	224	92	455
1954	2,628	1,472	744	2,569	206	79	515

Year	Apricots	Figs	Olives	Avocados	Cranberries	Straw-berries (Com'l)	Total Noncitrus
				- 1,000 tons -			
1939	332	88	23	10	35	223	9,698
1940	127	112	69	16	29	227	8,628
1941	214	121	55	20	36	226	9,680
1942	228	103	57	18	41	236	9,282
1943	104	134	57	26	34	118	7,971
1944	352	125	42	17	19	83	9,683
1945	192	113	30	27	33	94	8,489
1946	339	129	48	20	43	128	10,531
1947	201	131	40	21	40	161	9,838
1948	246	103	58	17	48	189	8,764
1949	197	94	35	21	42	158	9,761
1950	215	85	42	28	49	197	8,967
1951	183	103	64	34	46	207	9,816
1952	177	99	57	32	40	212	8,962
1953	243	83	28	32	60	218	8,636
1954	155	89	52	50	51	205	8,815

Fruits: Production and Utilization of Sales, Citrus and Noncitrus, United States, 1939-1954

Year	Citrus			
	Production	Total Sales	Fresh Sales	Processed
	1,000 tons	1,000 tons	1,000 tons	1,000 tons
1939	4,776	4,690	3,609	1,081
1940	5,662	5,566	4,053	1,513
1941	5,521	5,462	4,137	1,325
1942	6,302	6,245	4,385	1,860
1943	7,089	7,021	4,997	2,024
1944	7,233	7,128	4,929	2,199
1945	7,466	7,399	4,610	2,789
1946	7,861	7,553	4,956	2,597
1947	7,792	7,413	4,297	3,116
1948	6,636	6,558	3,796	2,762
1949	6,479	6,399	3,333	3,066
1950	7,538	7,457	3,769	3,688
1951	7,368	7,160	3,820	3,340
1952	7,338	7,267	3,874	3,393
1953	8,220	8,078	3,745	4,333
1954	8,053	7,970	3,849	4,121

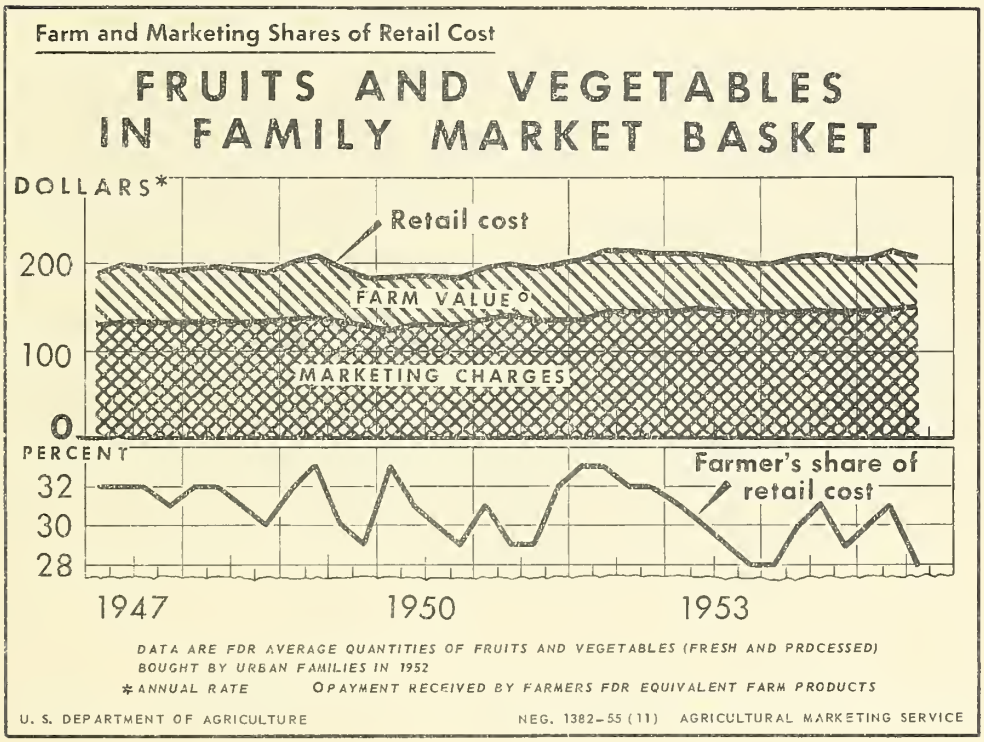
Year	Noncitrus						
	Production	Total Sales	Fresh Sales	Canned	Dried	Frozen	Other Processing
	- 1,000 tons -						
1939	9,698	8,791	4,295	945	2,255	24	1,272
1940	8,628	8,014	4,080	874	1,572	31	1,457
1941	9,680	9,050	4,371	1,182	1,783	37	1,677
1942	9,282	8,568	4,113	1,192	2,024	28	1,211
1943	7,971	7,691	2,967	854	2,576	88	1,206
1944	9,683	9,149	4,111	1,176	2,264	163	1,435
1945	8,489	8,102	3,500	983	1,994	193	1,432
1946	10,531	10,146	4,226	1,623	1,867	199	2,231
1947	9,838	9,340	4,248	1,370	2,168	115	1,439
1948	8,764	8,401	3,488	1,317	1,652	152	1,792
1949	9,761	8,918	4,080	1,428	1,830	139	1,441
1950	8,967	8,565	3,581	1,515	1,366	206	1,897
1951	9,816	9,233	3,614	1,645	1,706	174	2,094
1952	8,962	8,641	3,627	1,458	1,768	181	1,607
1953	8,636	8,340	3,478	1,583	1,608	219	1,452
1954	8,815	8,514	3,493	1,691	1,403	235	1,692

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TRENDS IN MARKETING FRUITS AND VEGETABLES

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Prepared for the National Outlook Conference, Fruit and Vegetable Work Sessions, December 1, 1955, by Horticultural Crops Section, Market Organization and Costs Branch, Marketing Research Division, Agricultural Marketing Service, U. S. Department of Agriculture.

MARKETING MARGINS FOR FRUITS AND VEGETABLES 1/

The cost of getting fruits and vegetables from the farm to the consumer has increased in recent years. Much of this increase has arisen because of the added services required to produce better quality food in a more convenient form, as evidenced by the increase in prepackaging and in freezing, which require more handling and processing. The cost of these services also has increased, mainly because of rising wage rates of the labor used in processing, handling, and transportation. However, marketing is becoming more efficient with improved operating methods, better marketing facilities, increased volume, and more rapid turnover.

Margins on Fruits and Vegetables Have Risen

Gross marketing margins for most food items have increased since 1947. It is estimated that in the first 9 months of 1955 the retail cost of all fruits and vegetables (fresh and processed) in the family market basket was about $209 and the farm value was about $62. In the same period of 1947 the retail cost was about $195 and the farm value $63. Thus, the marketing margin increased from $132 in 1947 to $147 in 1955, or 11 percent. (See cover chart.) This compares with an average increase of about 26 percent for all foods in the market basket.

The farmer's share of the dollar consumers spent for fruits and vegetables was 30 percent in the first 9 months of 1955 compared with an average of 32 percent in the same period of 1947. However, the farmer's share for several individual items has increased since 1947, for example, fresh oranges and several canned items.

Marketing Costs Have Risen

Costs of performing marketing functions in the distribution of farm food products have gradually increased. The estimated total cost of performing these services, or the National Marketing Bill, has increased 58 percent since 1947. The major part of this increase has resulted from increased wage rates. About one-fourth of the consumer's food dollar went for payment of wages and salaries in the food-marketing industry in 1954. This excludes the cost of the labor employed by transportation agencies, which is a considerable part of the transportation bill.

Average hourly earnings of employees in the canning and preserving industry increased from 47 cents in 1939 to $1.04 in 1947 and to about $1.41 in 1954. The average for the first 8 months of 1955 was approximately $1.46, a 4 percent increase above 1954 and 33 percent above the 1947-49 average.

Data relating specifically to other phases of fruit and vegetable marketing are not available. Earnings of employees in all food marketing

1/ This is a revision of an article originally prepared by Rollin O. Dunsdon, Agricultural Economist, Agricultural Marketing Service

enterprises, including those in local assembly, processing, transportation, wholesaling, and retailing, increased from an average of 62 cents an hour in 1939 to $1.14 in 1947 and to $1.75 in the first 3 months of 1955.

Transportation is another important cost in the marketing of all food, accounting for about 6 or 7 percent of the food dollar. For some fresh fruits and vegetables it may amount to 25 percent or more. Charges for transportation of fresh fruits and vegetables have risen sharply since World War II. In 1955 railroad freight rates for these products were 17 percent higher than the average of 1947-49 compared with an increase of 24 percent for all agricultural commodities. Rates on processed foods in 1955 averaged about 20 percent higher than in 1947-49.

Costs of other items used in marketing operations also have risen since the end of World War II. Prices of paperboard rose 27 percent between 1947 and 1955 and prices of metal containers rose 45 percent. Power, light, and fuel increased about 18 percent. Rents and taxes also increased.

Profits (after taxes) rose sharply following World War II and then gradually declined. Since 1951 they have been relatively stable. Ratios of profits to sales generally have been lower than in 1935-39, but ratios of profits to stockholders' equity generally have been larger than in the prewar period. 2/

Profits of the leading canning companies, expressed as a percentage of stockholders' equity, generally have been lower than for most other groups of food-processing companies. In 1954 they averaged 8.0 percent compared with 12.4 percent for leading grain mill products companies and an average of 8.8 percent for all food-processing companies combined. Some of these companies processed frozen fruits and vegetables as well as canned products. Data for the many smaller processing companies and the many companies engaged in assembling and wholesaling fresh fruits and vegetables are not available. Data relating to profits of retailers are available only for the leading chain-store companies. Profits of these companies amounted to 10.9 percent of stockholders' equity in 1954. Their profits expressed as a percentage of sales were 1.0 percent. Profits as a percentage of the sales dollar indicate the share of the consumer's food dollar available to the owners or stockholders as a return on invested capital. They do not give an adequate measure of operating efficiency nor do they give a clue as to equity in the division of the food dollar.

Retail Margins in Pittsburgh

Several marketing studies have shown that retailing accounts for a larger proportion of the marketing margin than wholesaling, transportation, processing, or local assembly. Data relating to retail selling prices, purchase prices, and gross margins (the difference between the retail

2/ The Marketing and Transportation Situation, No. 119, Oct. 1955.

selling price and the purchase price) for selected fruits and vegetables were obtained from 14 retail grocery stores in Pittsburgh once a week for 5 weeks beginning on October 18, 1954, and ending with November 20, 1954. In the sample were 4 chain stores, each representing a different chain, 4 independently owned stores with gross sales of more than $100,000 each and 6 independently owned stores with gross sales of between $50,000 and $100,000 each. Independent stores doing less than $50,000 gross sales were not represented in the sample. Prices were obtained on the items shown in table 1.

Retail Margins by Class of Commodities

Retail margins expressed as percentages of selling prices were generally larger for fresh fruits and vegetables than for canned and frozen items (table 1). The margin for fresh fruits and vegetables averaged about 30 percent of selling price compared with a little more than 20 percent for canned and frozen items. There was considerable variation among margins for individual fresh items. The largest percentage margin was received on onions, with apples and sweetpotatoes next. Much less variation was found in the margins for individual canned and frozen foods. Perishability, higher labor costs in handling produce, and the fact that cost prices fluctuate considerably on the more perishable items are reasons for the higher margins for fresh products. 3/

Margins by Different Sized Cans

In general, when comparing the margins of the same fruit or vegetable in different sized cans, it was found that in nearly all cases the absolute margin was greater for larger sized cans but the margin as a percentage of selling price was larger on the smaller sized cans.

There is some evidence to suggest that prices may be set so as to receive a fixed absolute markup for each can size. It was found that the margins averaged about the same on each sized can regardless of its content. On most 8-ounce cans, the margin was about 3 cents; on No. 303 (16 ounces) cans it was about 5 cents; and for No. 2-1/2 (29 ounces) cans it was 6 to 6-1/2 cents.

Retail Prices and Margins for Fresh Fruits and Vegetables in Pittsburgh, 1950 and 1954

The retail prices and margins for selected fresh fruits and vegetables in 1954 may be compared with an earlier study in Pittsburgh (July 1950-January 1951) to obtain some indication of trends in these items. 4/

3/ Bitting, H. Wayne, "Produce Department Space Utilization, Gross Margin and Operating Costs in Selected Retail Stores, Charlotte, N. C." U. S. Dept. Agr., Market. Res. Rpt. 30. Washington, D. C., June 1953.

4/ Badger, Henry T., "Retail Margins for Selected Fresh Fruits and Vegetables in Pittsburgh, Pa., July 1950-January 1951." Bur. Agr. Econ., U. S. Dept. Agr., Washington, D. C., Sept. 1953. (Processed)

Table 1.-Retail selling price, cost price, and gross margin for fruits and vegetables in 14 selected stores in Pittsburgh, October 18-November 20, 1954

Item 1/	Unit	Selling price	Cost price 2/	Gross margin	
				Actual	As percentage of selling price
		Cents	Cents	Cents	Percent
Fresh					
Apples	Lb.	12.6	8.3	4.3	34.1
Tomatoes	Lb.	28.2	21.4	6.8	24.1
Head lettuce	Head	22.4	17.7	4.7	21.0
Oranges	Doz.	55.8	39.1	16.7	29.9
Onions	Lb.	8.8	4.8	4.0	45.5
Irish potatoes	Lb.	5.5	4.1	1.4	25.5
Sweetpotatoes	Lb.	11.4	7.9	3.5	30.7
Frozen					
Orange juice	6 oz. can	18.6	15.7	2.9	15.6
Peaches	10 oz. pkg.	27.7	20.4	7.3	26.4
Strawberries	10 oz. pkg.	29.9	23.8	6.1	20.4
Green peas	10 oz. pkg.	19.8	15.7	4.1	20.7
Green beans, cut	10 oz. pkg.	25.6	20.2	5.4	21.1
Lima beans, Fordhook	10 oz. pkg.	28.3	22.5	5.8	20.5
Canned					
Orange juice	46 oz. can	36.0	28.7	7.3	20.3
Peaches, yellow	No. 303 can	24.4	19.4	5.0	20.5
Peaches, yellow	No.2-1/2 can	34.3	28.1	6.2	18.1
Peas	No. 303 can	18.4	15.2	3.2	17.4
Peas	8 oz. can	12.9	9.9	3.0	23.3
Corn, golden 3/	No. 303 can	17.4	13.6	3.8	21.8
Corn, golden 3/	8 oz. can	12.1	9.1	3.0	24.8
Green beans, cut	No. 303 can	20.5	15.4	5.1	24.9
Green beans, cut	8 oz. can	13.9	11.0	2.9	20.9
Lima beans, green	No. 303 can	24.8	19.3	5.5	22.2
Lima beans, green	8 oz. can	16.0	12.0	4.0	25.0
Tomatoes, peeled	No.2-1/2 can	27.8	21.3	6.5	23.4
Tomatoes, peeled	No. 303 can	18.9	14.3	4.6	24.3

1/ Includes all varieties, grades, sizes and/or brands of each item except specialty packs carried by stores in sample.

2/ Adjusted for physical losses from waste and spoilage.

3/ Includes both whole kernel and cream style.

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One factor to consider in making this comparison is that retailers' costs have increased during this period because of higher wage rates and more services provided.

Gross margins, or price spreads, in cents per unit were generally larger in 1954 than in 1949-50 but margins as percentages of retail prices were generally smaller (table 2). All prices were higher in 1954. In cents per unit, the retail prices increased more than cost prices, although percentage increases in cost prices were larger.

Table 2.-Retail selling and cost prices and gross margins for certain fresh fruits and vegetables in Pittsburgh, July 1950-January 1951, and October-November 1954 1/

Item	Unit	Selling price		Cost price 2/		Gross margin			
						Actual		As percentage of selling price	
		1950-51	1954	1950-51	1954	1950-51	1954	1950-51	1954
		Cents	Cents	Cents	Cents	Cents	Cents	Percent	Percent
Apples	Pound	10.4	12.6	6.4	8.3	4.0	4.3	38.5	34.1
Tomatoes	Pound	18.3	28.2	11.8	21.4	6.5	6.8	35.5	24.1
Head lettuce	Head	15.9	22.4	11.2	17.7	4.7	4.7	29.6	21.0
Oranges	Dozen	43.0	55.8	30.0	39.1	13.0	16.7	30.2	29.9
Onions	Pound	6.6	8.8	3.5	4.8	3.1	4.0	47.0	45.5
Irish potatoes	Pound	4.4	5.5	3.1	4.1	1.3	1.4	29.5	25.5
Sweetpotatoes	Pound	10.1	11.4	6.4	7.9	3.7	3.5	36.6	30.7

1/ 1950-51 sample included 2 local chain stores and 18 independents all with more than $35,000 gross sales. 1954 sample included 4 chain stores, 4 independents with gross sales of more than $100,000, and 6 independents with gross sales between $50,000 and $100,000.

2/ Cost adjusted for physical losses from waste and spoilage, based upon loss rates found in 1950 study.

Retail Margins for Canned and Frozen Items in 11 Cities, 1949-50, and in Pittsburgh, 1954

Retail gross margins of the canned and frozen items surveyed in Pittsburgh may be compared with the results of a study in 1949-50 in 11 cities of more than 350,000 population.5/ In general, percentage margins on individual items in the 14 Pittsburgh stores during the 5 weeks in October-November 1954 were about 2 percentage points more than in the stores in the 11 cities observed in the earlier study (table 3).

5/ Peters, C. W., "Price Spreads in the Marketing of Canned and Frozen Fruits and Vegetables." The Marketing and Transportation Situation, Aug. 1950, U. S. Dept. Agr., pp. 6-16.

Table 3.-Gross retail margins for canned and frozen fruits and vegetables in 11 large cities, 1949-50, and in Pittsburgh, October-November 1954.

Item	11 cities	Pittsburgh
	1949-50	Oct.-Nov. 1954
	Percent	Percent
Canned		
Cling peaches	18.1	1/ 20.5
Freestone peaches	17.8	
Green beans	20.5	24.9
Sweet corn	21.9	21.8
Green peas	18.4	17.4
Tomatoes	19.3	24.3
Average	19.1	21.8
Frozen		
Peaches	21.5	26.4
Strawberries	18.8	20.4
Baby lima beans	20.3	2/ 20.5
Peas	20.5	20.7
Average	20.3	22.0

1/ Data for both cling and freestone peaches.
2/ Fordhooks rather than baby limas.

RETAIL FOOD STORES HAVE BECOME LARGER

Average sales per retail food store increased from approximately $61,000 in 1948 to $89,000 in 1953 (table 4). Some of this increase resulted from a rise in prices, but much of it reflected an increase in the quantity of goods sold. The increase in dollars of 1948 purchasing power was approximately 34 percent. Average dollar sales for grocery stores, which have about four-fifths of total food sales increased from about $66,000 to nearly $94,000. The volume of goods sold was about one-third larger in 1953 than in 1948.

Table 4.-Number of grocery and other food stores and their volume of sales, 1948 and 1953

Type of store and ownership	Number of stores Dec. 31		Volume of sales Total		Volume of sales Per store	
	1948	1953	1948	1953	1948	1953
	Number	Number	Million dollars	Million dollars	Dollars	Dollars
Grocery stores:						
Chain 1/	22,550	17,432	8,532	12,404	378,359	711,565
Independent	355,389	340,904	16,238	21,219	45,691	62,243
Total	377,939	358,336	24,770	33,623	65,540	93,831
Other food stores	126,500	98,073	6,196	7,154	48,980	72,946
Total	504,439	456,409	30,966	40,777	61,387	89,343

1/ Units of an organization operating 11 or more stores.

Compiled from reports of the Bur. of the Census.

The number of food stores declined 10 percent between 1948 and 1953, continuing a trend that developed before 1948. Between 1939 and 1948, the number also declined 10 percent. The reduction was larger among specialty food stores (bakeries, meat and fish markets, and other stores having limited lines) than among grocery stores. The grocery-store classification includes the supermarkets. In the grocery group, chain stores (units of an organization operating 11 or more stores) decreased more than independents. Many chain organizations have been replacing small stores with fewer large stores.

Fewer stores are needed now that many more families shop by auto. A store can draw customers from a much wider area than formerly. Thus, the automobile has been responsible for a reduction in the number of retail food stores, as the truck has been responsible for a decrease in the number

of establishments assembling farm products. Customers have been attracted to large stores by their wide assortment of foods and other merchandise, by their parking lots, their comfortable and convenient display rooms, their parcel pickups, and other services. A large store can advertise and and do other sales-promotion work that would be too expensive for a small store. Large stores probably have a quicker turnover of stock and larger sales per unit of floor space than do small stores. Perhaps many are able to obtain economies of scale in the use of labor and equipment. 6/

Chain grocery stores had about 37 percent of the total grocery-store sales in 1953, 36 percent in 1952, 34 percent in 1948, and 33 percent in 1939. The 12 largest chain-store companies in the United States, each of which had an annual sales total of more than 100 million dollars in 1952, had about 28 percent of the total grocery-store sales in 1952, and about 26 percent in 1939. The three largest had about one-fifth of the grocery-store sales in both 1952 and 1939. Thus, changes in the distribution of sales between chain and independent stores and among chain-store companies of different size groups have been small. Medium and small chains made a slight increase in their share of the total grocery-store sales at the expense of independent stores.

A further decrease in the number of retail food stores seems probable. There are still many small stores, some of which are operated by chains which have had a policy of merging small stores. The shift of population to suburban areas has drawn away customers from many small stores. Small stores will continue where they serve customers who cannot easily reach a large store or are in areas which cannot support a large store. Often small stores draw customers who wish to buy only a few items because purchases can be made more quickly than in a larger store or can be made when larger stores are closed.

A large proportion of the independent stores now belong to retailer-owned cooperative wholesaling organizations or are affiliated with wholesaler-sponsored voluntary chain organizations. More of the wholesalers are assuming the buying functions of retailers and are helping the retailers through advertising and merchandising aids, store engineering services, accounting aids, and general store supervision. Wholesalers are adding new lines of merchandise, such as frozen foods, nonfood items, and in a few instances meat departments. These changes in wholesaler-retailer relations have been aimed at providing independent retail stores with advantages of integration, specialized management, and sales promotion possessed by chainstore organizations.

6/ For a discussion of the increase in the number and sales of supermarkets, see the December 1951 issue of The Marketing and Transportation Situation.

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LIGHTER AND CHEAPER CONTAINERS FOR FRUITS AND VEGETABLES

For packaging many food products, especially fresh fruits and vegetables, large, cumbersome, and expensive wood shipping containers have been replaced by smaller, lighter, and cheaper fiberboard containers. The substantial increase in the cost of the wood components of many types of wood and wood veneer containers since World War II has been one of the chief factors responsible for the shift to fiberboard for bulk packaging of many fruits and vegetables. Other factors accounting in part for this trend are increased labor costs for packing, wrapping, loading, and handling the commodities and increased freight and refrigeration charges. The fiberboard packages used for most commodities are generally smaller and considerably lighter than the wood packages they have replaced. This particular feature of the new containers has made them quite popular with retailers.

Substantial savings have been realized in handling many fruits and vegetables not only in the initial costs of the fiberboard packages as compared with the wood containers but also in the cost of container assembly, packing, closing, and transportation. In the changeover from wood to fiberboard packages for oranges and lemons, for example, individual wrapping and place-packing of the fruit has been eliminated in favor of the volume-fill, jumble pack, producing important savings in packing costs. As the fiberboard packages are lighter and make somewhat more compact loads than the wood containers, some economies have also been achieved in freight and refrigeration costs.

The introduction of fiberboard containers for some commodities, especially lettuce, followed the development of special methods of processing the commodities for shipment. Development of the vacuum-cooling method for removal of field heat from lettuce has made it possible to ship the commodity in dry containers without crushed ice in the packages or over the load. This has made feasible the packaging of the product in fiberboard for shipment. As most of the lettuce shipped from the important lettuce-growing areas in California and Arizona in fiberboard cartons is packed in the field instead of in packing sheds as it is when the wood crates are used, substantial savings in packing costs have been realized. Since the fiberboard cartons lend themselves to handling on pallets and conveyors more effectively than the wood crates, they have proved easier and less expensive to handle and load for shipment.

Data on the comparative quantities of various important perishable commodities currently being packaged in different types of containers are meager. Recent estimates, however, are that approximately 98 percent of the California lemon crop and about 80 percent of the California-Arizona lettuce shipments are now packaged in fiberboard cartons compared with about 10 percent for both commodities 2 years ago. A considerably smaller but constantly increasing proportion of the California and Florida fresh orange shipments is being marketed in fiberboard packages. Practically all the cranberries marketed domestically are now packaged in fiberboard and a considerable quantity of apples is also packaged in various types and sizes of cartons. Experiments are now under way looking toward the development of suitable fiberboard packages for plums and pears. Recent developments in packaging and marketing point to a continuation of the trend away from wood to fiberboard for packaging many of these commodities.

Outlook for Dry Edible Beans

Overall supplies of beans will be in excess of market requirements during the 1955-56 marketing year. Export demand is expected to be better largely because ample supplies of white beans will be available for export. Exports of colored beans are expected to be at least as high as in 1954-55. Domestic demand should be somewhat better than in 1954-55.

Total supplies may well aggregate 20.5 million cwt. as compared with 19.4 million in 1954-55. Increased supplies are due largely to greater carryover stocks, most of which are owned by Commodity Credit Corporation. Exports are expected to be up about 0.7 million and domestic disappearance up 0.3 to 0.4 million. Carryover stocks from the 1955-56 crop are expected to be the same or lower than from the 1954 crop.

White bean supplies (pea, great northern, small white) will be up about 20% this year due to a much larger crop, particularly of pea beans. Amount of carryover will depend largely on export movement. All classes of white beans will be in ample supply. In spite of a smaller crop, supplies of colored beans (pinto, pink, red kidney, small red, cranberry) will be about the same as in 1954-55. The heavy carryover of pink, pinto and small red beans from the 1954 crop is the cause of the high level of supplies this year. Red kidney beans will be in short supply as will cranberry beans. Pinto, pink and small red beans will be in heavy supply.

Total supplies of lima beans will be some 15% smaller than a year ago, with most of the reduction being in supplies of baby lima beans. Carryover stocks should be down to low levels on both large and baby limas at the end of the 1955-crop marketing year.

Blackeye beans are in heavier supply than in 1954-55, but it is doubtful that there is a substantial surplus.

Pricewise, over-all bean prices are expected to average out lower than last year. The heavier over-all supplies, coupled with support prices of about $1.00 lower, are the major factors. Much of the anticipated increase in disappearance will come from CCC stocks, minimizing its impact on the 1955 crop prices.

White beans are expected to be lower in price. The short crop of 1954 resulted in excellent prices, particularly for pea and small white beans. With supplies ample this year, prices may be expected to settle close to support levels unless export demand is very heavy.

Red kidney and cranberry beans will enjoy good prices but small red, pink and pinto beans will probably sell close to the support level. Baby lima beans will enjoy higher prices than a year ago and will be above support levels, while

Prepared for the 33rd Annual Agricultural Outlook Conference, Fruit and Vegetable Work Session, December 1, 1955, by: Commodity Programs Branch, Grain Division, S. Commodity Stabilization Service, United States Department of Agriculture.

large lima beans may also be priced somewhat above the support price, although there is considerable question as to the size of this crop.

The 1955 crop of blackeye beans will probably average considerably lower in price than the 1954 crop, but some recovery from the low levels of early November is probable.

Background

Tables 1 - 8 attached contain basic data on acreage, production, price, supply-distribution, and price support operations for dry edible beans. Significant features as shown in these data and other material are discussed in this section.

Acreage

Planted acreage by States 1920-1954 is shown in Table 1. U.S. acreage expanded from an average of 1,585,000 acres in 1920-29 to 1,949,000 in 1930-39 and 2,034,000 in 1940-49. However, the 1950-54 average is down to 1,527,000.

Figure 1 shows the relative importance of each State's acreage for the last 3 1/2 decades.

Figure 1

Average Planted Acreage by States as Percent of U.S. Acreage

(Percent)

State	1920-29	1930-39	1940-49	1950-54
New York	7	8	7	10
Michigan	36	30	29	28
Eastern States	43	38	36	38
Colorado	19	23	17	16
Idaho	4	6	7	9
Montana	2	1	1	1
Nebraska	1/	1	3	5
New Mexico	11	10	11	4
Wyoming	1	2	4	4
Rocky Mt. States	37	43	43	39
California	18	17	18	21
Washington	1/	1/	1/	1
Pacific Coast	18	17	18	22

1/ Less than 0.5%

The importance of the Rocky Mountain and Pacific Coast States is on the increase, due primarily to the rise of Idaho, Nebraska and Washington.

Production

U.S. production of beans has ranged from a low of 10,410,000 cwt. in 1932 to a high of 19,863,000 cwt. in 1949 (Table 2). The 1940-49 decade had the highest average production (16,666,000). The 1950-54 production is almost 10% lower (15,968,000).

Figure 2 shows the relative importance of State production.

Figure 2

Average Production by Principal States as Percent of U.S. Production

(Percent)

State	1920-29	1930-39	1940-49	1950-54
Michigan	37	31	25	22
New York	8	9	8	9
Eastern States	45	40	33	31
Colorado	8	9	11	14
Idaho	7	11	12	14
Montana	2	2	2	1
Nebraska	1/	1	5	6
New Mexico	5	4	4	1
Wyoming	1	3	6	5
Rocky Mt. States	23	30	40	41
California	31	29	26	27
Washington	1/	1/	1/	2
Pacific States	31	29	26	29

1/ Less than 0.5%

The relative importance of the Rocky Mountain area has been steadily increasing primarily at the expense of the Eastern area. Looking at the individual States, California has become the most important State with Michigan dropping to second position.

There have been wide fluctuations from year to year in production of individual classes (Table 3), but when averages are used the rate of change is slowed. Significant changes may be determined from Figure 3.

Figure 3

Average Production by Class as Percent of Total U.S. Production

(Percent) 1/

Class	1920-29	1930-39	1940-49	1950-54
Pea	38	31	26	22
Great Northern	7	12	18	11
Small White	3	4	4	4
Yelloweye	1	1	1	1
Total White	49	48	49	38
Pinto	13	14	18	24
Pink	6	4	3	3
Small Red	2	3	2	5
Red Kidney	5	5	6	8
Cranberry	1	2	1	1
Total Colored	27	28	30	41
Large Lima	10	8	7	8
Baby Lima	3	5	6	5
Total Lima	13	13	13	13
Blackeye	4	4	4	5
Other	7	6	5	5
Total Other	11	10	9	10

1/ Because of rounding, percentages do not total 100 in every column

When the various classes are grouped in a logical manner (as shown in Figure 3) the relative importance of each group is remarkably stable for the first 3 decades. The white and lima groups remained almost identical percentagewise in this period while colored beans increased slightly at the expense of "other" beans.

The 1950-54 period shows a sharp increase in the colored group at the expense of the white group. This is the result in part of unfavorable weather in Michigan in two of the 5 years, and it is doubtful the entire decade will show the same relationship as the first half. Supplies of colored beans as a group have been well in excess of demand during much of the 1950-54 period.

Within the white group, great northerns have become more important and pea beans less so. In the colored group, pintos, small reds and red kidneys have been increasing in importance and pink beans have been declining. Baby lima beans which increased in importance in the 30's and 40's are presently receding and large lima beans are again increasing percentagewise. Blackeye production remained stable in importance until the 1950-54 period, when a moderate increase took place, while "other" beans have been steadily declining in importance.

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Table 4 shows the relative importance of each class by State to the total production of the State and to the total U.S. production of the particular class. Highlights revealed are (1) the concentration in the total production of small white, pink, large lima, baby lima, and blackeye beans in one State - California, and of pea beans in Michigan and red kidney beans in New York. (2) The increase in pinto bean production in Idaho, Montana, Nebraska, and Wyoming. (3) Increase of production of small red beans in Washington.

Supply-Distribution

The supply-distribution for the marketing years 1920-54 as shown in Table 5 is briefly analyzed as follows: Imports have been of little significance since the 1920's, total supplies have been trending upward due to increased production, domestic disappearance has been keeping pace with population increases, exports are sharply higher in the 40's and 50's, and carryover stocks have been moving upward. The heavy carryover stocks in the 1950's reflect the heavy overproduction in 1948 and 1949, with carryover stocks from the 1952, 1953 and 1954 crops being much lower. On the other hand, a considerable portion of the exports in the 1950-54 period consisted of beans acquired by Commodity Credit Corporation under the price support program which were sold at a loss or which moved under foreign assistance programs.

Prices and Price Stabilization

Stabilization of bean prices was first undertaken in the late 1930's in the form of surplus removal operations. With advent of World War II support prices became a tool to obtain expanded production and nonrecourse loans were made available to producers in addition to direct purchases. Because of the heavy demand for beans during the war and the immediate postwar period, no stocks were accumulated by Commodity Credit Corporation under the price support program until the 1948 crop. (See Table 7) The price support program has been of considerable importance on every crop since 1948.

Table 8 shows the breakdown of price support operations by States for the 1948-54 crops. In total for the 7 years, the lowest loan deliveries to CCC in terms of percentage of production took place in New York and California, and the highest in Washington, Wyoming and Montana. In summary (Table 8-a), Commodity Credit Corporation acquired from the 1948-54 crops a total of 19.2 million cwt. which represented 16% of the total U.S. production for this period.

As indicated in Table 6, the weighted U.S. season average prices to farmers have ranged from a low of $1.97 per 100 pounds in 1932 to a high of $11.60 in 1947. The low 1930-39 average price of $3.16 compares with the 1950-54 average of $8.04. The price movement has followed generally the over-all trend of agricultural prices. In relationship to parity (column 13 of Table 7), beans have fared well since the 1930's, staying above 85% of parity in all but one year.

Importance of International Trade in Dry Beans

The U.S. bean production in 1955 is about 15% of estimated world production of 125 to 150 million cwt. World trade, exclusive of the Orient, has been around 7 million cwt. in recent years with the U.S. contributing about 2.5 million or more than 1/3 of the total.

About 2/3 of U.S. exports go to Latin America with most of the remainder going to Western Europe. Cuba, Mexico and the United Kingdom have been our best customers.

Factors Adversely Affecting Export Market Possibilities

Consuming habits are expressed in preferences for particular types of beans. Europe, for example, is reluctant to take anything but white beans. Latin America prefers colored beans. At times U.S. exportable supplies are of a type which sharply limits export sales to one area or the other.

Import restrictions exist in every importing country in Europe, primarily to conserve exchange. Recent years have seen some liberalization of controls. Preferences for empire or colonial production also exist.

Export Outlook

Exports to Latin American countries have been on the increase and this trend is expected to continue, but not at a rate sufficient to offset U.S. production potentialities. Europe's imports from the U.S. are expected to be substantially higher than in 1954 when supplies of white beans in the U.S. were small.

Outlook for Dry Field Peas

Supplies of dry field peas are expected to approximate 2.8 million cwt. (cleaned) in the 1955-crop marketing year. The 1954-crop marketing year supply approached 4.0 million cwt. Domestic disappearance is expected to continue at about the same level but a drastic reduction in exports appears certain.

Crop failures in European countries caused exports from the 1954 crop to soar to 1.3 million cwt., a figure unprecedented in peacetime. Exports for the preceding 5 years averaged slightly over 0.5 million cwt.

After starting at a relatively low level, prices for the 1954 crop advanced to very high levels. With export demand down sharply, prices for the 1955 crop may average somewhat lower than 1954-crop prices, but are expected to remain at a relatively favorable level. Greatly reduced yields prevented the production of a heavy supply in 1955.

Background

Basic data on acreage, production, price, and supply-distribution of dry field peas appears in Tables 9 - 13, inclusive. Data in these tables generally pertain to both smooth and wrinkled peas. The smooth or edible types move to the consumer in the U.S. primarily in the form of split peas. The wrinkled or seed types are used primarily to plant canning and fresh pea acreage and in planting home gardens. Discussion of significant features of the data in Tables 9 - 13 follows.

Acreage

The planted acreage of field peas (Table 9) expanded greatly in the 1940's. Heavy wartime and postwar demand provided a ready market for the edible types at attractive prices. Readjustment, though sharp, was accomplished substantially by 1950. Acreage in the 1950-54 period has been close to prewar.

Production

U.S. production (Table 10) of dry field peas has followed the acreage pattern quite closely, and has been pretty well balanced with demand in most recent years. Production is highly concentrated with Idaho and Washington jointly producing about 86% of the total production in the 1950-54 period.

Smooth peas (principally Alaska, First and Best, and White Canada) made up 80% of the production in the 1940-49 decade and 70% in the 1950-54 period. Green types (primarily Alaska) dropped from 67% of total field production in the 1940's to 52% in 1950-54. White types (First and Best, White Canada, etc.) increased from 13% in 1940-49 to 18% in 1950-54. Wrinkled types increased from 20 to 30% in the same period.

Supply-Distribution

Total supplies of dry field peas have been considerably lower in the 1950-54 period than in the 1940's. Imports have been somewhat higher during this period but represent less than 3% of total supplies. Domestic disappearance has remained quite constant throughout the 1950-54 period although below the 1940's. Exports, which dropped sharply after the cessation of the immediate postwar demand, moved up quite well from 1950-53 and advanced sharply in 1954. Ending stocks have not been burdensome in most recent years.

Prices

Prices for peas have followed the general trend of agricultural prices, rising sharply in the 1940-49 decade and averaging an additional small increase in 1950-54. Prices for the 1952, 1953 and 1954 crops particularly have been favorable.

Marketing Services for Dry Beans and Peas

Market News

At the present time a bean market news service is in effect in California under a Federal-State cocperative agreement. Weekly reports are issued by T. J. Cameron, USDA, Agricultural Marketing Service, Grain Division, 304 Wholesale Terminal Building, Los Angeles 21, California, and by F. L. Lyons, USDA, Agricultural Marketing Service, Grain Division, 729 Appraisers Building, San Francisco 11, California. The reports are devoted principally to the market situation in California. However, some data relating to the other areas is published. Foreign trade statistics, arrivals of beans in Cuba, data relative to price support programs and CCC purchases, sales and inventory are released regularly. Information regarding the bean markets at some of the bean producing areas other than California is obtained by a few correspondents located in these areas.

Inspection of Beans and Peas

Dry beans, peas and split peas are inspected by or under the supervision of the Grain Division, Agricultural Marketing Service. These inspections are performed under Regulations (7 CFR, Part 68) issued under authority of the Agricultural Marketing Act of 1946.

Inspections are performed to determine the quality and condition of the commodities in terms of official standards issued by the Agricultural Marketing Service. These standards were developed over a period of years and are designed to reflect the quality of the respective commodities as produced and marketed in the United States.

The inspection service may be performed by authorized employees of the Grain Division, Agricultural Marketing Service, or by employees of State Departments of Agriculture, and other agencies who are qualified and licensed by the Secretary of Agriculture to perform this service. At the present time, agreements or contracts are in effect with State Departments of Agriculture and other agencies in all bean and pea producing areas. The service is also available at terminal markets in the interior and principal ports from which beans and peas may be exported. Under this organization setup the service is made readily available to all interested parties engaged in the production and marketing of beans and peas.

The standards are also applied by these inspectors for the purpose of price support or purchase and loan programs. In this field the service aids in the execution of contracts. Certificates issued serve as evidence of true quality and condition of the commodities in storage or other locations.

Marketing and Utilization Research

Some recent publications by the Department dealing with research findings concerning dry beans and peas are:

"Packaging of Rice and Dry Edible Beans and Peas" - August 1949.

"The European Market For Dry Edible Beans and Related Pulses" - May 1950 FAR No. 47.

"Marketing Dry Edible Beans and Peas" - June 1951 - Technical Bulletin No. 1044.

"Trends in Packaging Materials and Equipment for Dry Edible Beans and Related Commodities" - June 1952.

"Development of Rapid Methods of Soaking and Cooking Dry Beans" - June 1952. Technical Bulletin No. 1051.

"Modern Cookery for Dry Beans, Peas and Lentils" - September 1952. Leaflet No. 326.

"Merchandising Peas and Split Peas Packaged in Transparent Films" - May 1953.

TABLE 1

DRY EDIBLE BEANS - Planted Acres, 1920-54 1/
(000 acres)

Year Beginning Sept. 1	California	Colorado	Idaho	Michigan	Montana	Nebraska	New Mexico	New York	Washington	Wyoming	Others	Total
1920	300	60	24	334	5	2	152	56		1	30	964
21	272	52	17	314	5	1	148	67		1	28	905
22	324	123	24	509	5	1	127	108		2	31	1,254
23	299	185	43	536	24	2	121	137		5	35	1,387
24	206	358	66	679	25	3	215	208		8	34	1,802
25	240	415	73	739	26	2	160	154		11	39	1,859
26	305	485	80	838	33	5	216	110		16	33	2,121
27	296	379	101	603	29	6	206	77		19	31	1,747
28	307	468	116	592	41	10	200	81		24	35	1,874
29	339	422	137	575	48	10	189	109	5	30	60	1,924
10-yr. average	289	295	68	572	24	4	173	111	1	12	36	1,585
1930	363	483	171	734	42	11	237	135	1	38	51	2,266
31	334	468	180	690	33	17	200	133		42	48	2,145
32	225	362	77	569	21	15	165	128		22	41	1,625
33	275	462	103	573	30	15	191	164		36	46	1,895
34	299	527	95	665	18	23	120	152		37	49	1,985
35	339	543	120	565	31	20	208	168		49	44	2,087
36	347	428	107	576	18	17	218	152		46	41	1,950
37	386	394	125	472	22	25	221	161	1	67	37	1,911
38	349	335	101	477	18	23	196	161	2	55	42	1,759
39	340	430	103	499	16	17	238	138	2	53	40	1,876
10-yr. average	326	443	118	582	25	18	199	149	1	44	44	1,949
1940	391	391	117	618	18	24	265	149	3	61	42	2,079
41	389	340	131	791	22	29	270	170	4	62	42	2,250
42	383	350	153	593	27	38	275	158	3	80	42	2,102
43	439	539	165	655	74	97	300	128	4	122	76	2,599
44	349	350	148	701	25	60	267	120	3	90	42	2,155
45	314	290	117	435	20	53	203	101	4	90	32	1,659
46	283	276	131	531	18	64	142	128	4	93	34	1,704
47	323	331	159	494	21	80	155	138	4	112	39	1,856
48	368	341	150	514	22	85	191	181	5	98	41	1,996
49	358	307	149	529	19	90	181	176	8	83	36	1,936
10-yr. average	360	351	142	586	27	62	225	145	4	89	43	2,034
1950	319	261	133	503	11	68	98	153	12	67	31	1,656
51	350	230	141	392	9	78	74	142	14	61	28	1,519
52	295	184	119	349	7	58	56	152	11	55	21	1,307
53	283	234	152	384	10	70	58	135	22	62	26	1,436
54	334	292	169	492	16	80	43	152	40	67	29	1,714
5-yr. average	316	240	143	424	11	71	66	147	20	62	27	1,527

1/ Source: Crop Reporting Board, AMS

Grain-CSS
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TABLE 2

DRY EDIBLE BEANS - Production by States (Cleaned) 1/
(Thousand 100 lb. bags)

Year Beginning Sept. 1	California	Colorado	Idaho	Michigan	Montana	Nebraska	New Mexico	New York	Washington	Wyoming	Others	Total
1920	1,656	232	182	2,533	32	10	528	468		8	160	5,809
21	2,024	207	134	2,050	29	5	560	611		7	145	5,772
22	2,852	283	224	2,766	35	5	145	844		13	157	7,324
23	2,577	710	427	3,550	145	10	391	933		25	187	8,955
24	1,428	542	587	3,857	160	16	491	1,109		46	174	8,410
25	2,507	1,324	731	4,702	205	10	356	617		74	229	10,755
26	3,148	774	707	3,765	243	18	407	334		95	178	9,669
27	2,665	989	972	2,848	287	32	488	512		149	166	9,108
28	2,881	963	1,096	3,250	352	47	342	596		199	174	9,900
29	3,153	1,224	1,470	3,140	383	37	960	709	11	264	210	11,561
10-yr. average	2,489	725	653	3,246	186	19	467	673	1	88	178	8,725
1930	4,009	2,510	1,762	2,826	399	65	570	722	8	393	276	13,540
31	3,155	811	1,872	3,378	250	59	699	1,179	0	367	200	11,970
32	2,310	384	949	4,900	197	76	329	917	0	173	175	10,410
33	3,344	1,110	1,309	3,994	232	89	490	973	0	328	196	12,065
34	3,463	342	1,121	3,898	153	48	64	1,133	0	283	151	10,656
35	3,569	1,472	1,189	4,528	256	99	540	1,046	0	444	190	13,333
36	3,795	1,136	1,325	2,353	148	110	405	832	0	487	176	10,767
37	5,101	910	1,665	3,972	227	208	623	1,291	11	725	207	14,940
38	4,333	1,496	1,429	4,407	202	200	287	1,495	17	583	268	14,717
39	3,752	1,493	1,408	4,764	178	216	467	1,202	17	534	223	14,254
10-yr. average	3,683	1,166	1,403	3,902	224	117	447	1,078	5	433	206	12,664
1940	5,216	1,827	1,575	4,029	214	297	931	816	29	640	216	15,790
41	4,831	1,491	1,681	4,793	199	416	1,162	1,475	42	764	246	17,100
42	4,649	1,702	1,974	4,808	296	540	978	1,431	28	922	240	17,568
43	4,755	2,417	2,318	5,073	521	974	722	1,074	39	1,223	319	19,435
44	3,574	1,660	2,068	4,304	217	571	660	826	28	970	166	15,044
45	3,274	1,493	1,570	2,650	206	690	276	650	45	946	150	11,950
46	3,264	1,448	1,958	3,668	248	987	243	1,421	39	1,214	212	14,702
47	3,970	2,396	2,087	2,847	267	1,029	315	1,321	43	1,328	226	15,829
48	4,960	2,146	2,424	4,258	284	1,368	408	2,070	69	1,197	200	19,384
49	4,696	2,274	2,421	5,502	233	1,191	560	1,572	114	1,108	192	19,863
10-yr. average	4,319	1,885	2,008	4,193	268	806	625	1,266	48	1,031	217	16,666
1950	4,138	1,741	2,265	3,312	145	862	197	1,322	226	787	138	15,128
51	4,709	1,469	2,227	4,022	123	724	114	1,442	268	674	107	15,879
52	3,873	1,747	2,018	3,474	105	1,063	145	1,548	177	747	113	15,010
53	3,985	2,192	2,514	3,750	169	1,186	148	1,420	384	887	183	16,818
54 2/	4,610	1,881	2,511	3,254	236	1,226	205	1,287	777	883	133	17,003
5-yr. average	4,263	2,307	2,307	3,562	155	1,012	162	1,404	366	796	135	15,968

Grain-CSS
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1/ Source: Crop Reporting Board, AMS
2/ Preliminary

TABLE 3

DRY EDIBLE BEANS - Production by Classes (Cleaned Basis) 1/
(Thousand 100 lb. Bags)

Year Beginning Sept. 1	Pea & Med. White	Great Northern	Small White	Small Red	Cranberry	Pink	Yelloweye	Pinto	Red Kidney	Blackeye	Large Lima	Baby Lima	Others	Total
1920	2,698	-	150	28	23	219	81	681	209	178	791	239	512	5,809
21	2,149	-	114	114	37	531	100	705	375	359	639	142	507	5,772
22	2,978	30	301	70	69	614	111	323	474	232	1,268	130	724	7,324
23	3,803	157	340	56	135	635	123	1,014	598	260	785	210	839	8,955
24	4,085	583	75	71	68	274	159	1,023	325	268	465	218	796	8,410
25	4,392	695	188	153	56	619	82	1,618	752	423	752	282	743	10,755
26	3,525	864	171	107	69	570	71	1,158	565	428	1,188	550	403	9,669
27	2,823	1,124	267	208	104	527	79	1,489	459	286	962	296	484	9,108
28	3,191	1,247	392	264	98	532	86	1,337	611	396	822	370	554	9,900
29	3,250	1,579	385	362	105	575	93	2,175	425	477	916	451	768	11,561
10-yr. average	3,289	628	238	143	76	510	98	1,152	479	331	859	289	633	8,726
1930	3,046	1,865	459	483	121	586	77	3,088	364	800	1,034	653	964	13,540
31	3,651	1,816	389	442	145	395	129	1,525	617	417	966	602	876	11,970
32	5,197	939	210	237	88	479	74	764	449	255	809	298	611	10,410
33	4,198	1,356	395	263	144	565	96	1,691	537	557	895	597	771	12,065
34	4,093	1,026	378	253	227	456	161	539	522	493	1,007	664	837	10,656
35	4,478	1,418	315	273	367	758	135	2,287	577	551	886	480	808	13,333
36	2,300	1,460	465	227	199	415	104	1,722	635	708	1,035	811	686	10,767
37	4,119	2,120	978	243	184	431	157	1,764	798	813	1,347	1,084	902	14,940
38	4,526	1,704	523	270	263	604	171	2,146	937	487	1,324	870	892	14,717
39	4,297	1,554	402	287	654	429	145	2,547	832	539	1,071	644	853	14,254
10-yr. average	3,990	1,526	451	298	239	512	125	1,807	627	562	1,037	671	820	12,665
1940	3,973	1,740	632	346	261	831	92	3,389	632	1,096	1,226	830	742	15,790
41	4,886	2,111	913	356	233	551	96	3,063	1,170	662	1,246	860	953	17,100
42	4,920	2,792	773	322	274	543	134	3,123	867	696	1,287	784	1,053	17,568
43	5,245	3,681	637	361	271	488	147	3,785	641	824	1,228	1,038	1,089	19,435
44	4,422	2,477	464	296	118	281	111	2,892	570	404	1,096	961	952	15,044
45	2,687	2,481	390	229	102	269	70	2,063	555	407	910	1,007	780	11,950
46	3,814	3,440	360	307	76	333	87	2,105	1,231	392	782	1,055	720	14,702
47	3,074	3,554	514	473	72	453	89	3,278	1,111	638	855	1,058	660	15,829
48	4,476	4,039	734	496	135	556	128	3,091	1,742	1,087	1,144	984	772	19,384
49	5,334	3,204	625	654	371	634	166	3,853	1,392	318	1,376	1,272	664	19,863
10-yr. average	4,283	2,952	604	384	191	494	112	3,064	991	652	1,115	985	838	16,666
1950	3,356	1,724	466	486	133	336	124	3,623	1,123	611	1,225	1,132	789	15,128
51	4,072	1,484	736	768	85	534	146	3,002	1,344	918	1,168	798	824	15,879
52	3,412	1,927	540	605	108	393	180	3,168	1,421	647	1,360	430	819	15,010
53	3,607	1,819	560	666	163	450	200	4,868	1,287	767	1,137	639	655	16,818
54 2/	3,131	2,009	698	1,219	94	656	61	4,567	1,210	703	1,259	758	638	17,003
5-yr. average	3,516	1,793	600	749	118	474	142	3,845	1,277	729	1,230	751	745	15,968

Grain-CSS
Agriculture-Washington
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1/ Source: 1944-54 Crop Reporting Board, AMS. 1920-43 Grain Division, CSS, estimates based on Crop Reporting Board figures for uncleaned production.

2/ Preliminary

TABLE 4

DRY EDIBLE BEANS
Production by Principal States and Major Classes 1945-54
(Thousands of cwt. - Cleaned)

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	10-yr. Average	% of State Prod.	% of U.S. Prod. for class
California													
Small White	390	360	514	734	625	466	736	540	560	698	562	13.5	100.0
Pinto	50	82	129	112	101	66	34	28	50	53	70	1.7	2.1
Red Kidney	73	102	124	182	155	98	210	176	138	135	139	3.4	11.2
Pink	269	333	453	556	634	334	517	378	438	638	455	11.0	98.7
Small Red	16	16	38	17	39	24	124	87	79	169	61	1.5	5.0
Cranberry	15	7	17	24	40	12	13	23	28	18	20	0.5	14.9
Large Lima	910	782	855	1,144	1,376	1,225	1,168	1,360	1,137	1,259	1,122	27.0	100.0
Baby Lima	1,007	1,055	1,058	984	1,272	1,132	798	430	639	758	913	22.0	100.0
Blackeye	407	392	638	1,087	318	611	918	647	767	703	649	15.6	100.0
Others	137	135	144	120	136	170	191	204	149	179	156	3.8	18.2
Total	3,274	3,264	3,970	4,960	4,696	4,138	4,709	3,873	3,985	4,610	4,147	100.0	
Colorado													
Pinto	1,436	1,419	2,315	2,060	2,202	1,687	1,430	1,747	2,192	1,881	1,837	97.8	54.6
Others	57	29	81	86	72	54	39	-	-	-	42	2.2	4.9
Total	1,493	1,448	2,396	2,146	2,274	1,741	1,469	1,747	2,192	1,881	1,879	100.0	
Idaho													
Pea	17	18	22	25	35	35	32	44	10	17	25	1.1	0.7
Great Northern	861	1,249	1,165	1,360	999	470	550	548	518	527	825	37.5	32.1
Pinto	83	82	205	261	560	1,056	809	671	1,390	1,303	642	29.2	19.1
Small Red	213	291	435	479	530	307	427	379	300	398	376	17.1	63.7
Other	396	318	260	299	297	397	409	376	296	266	331	15.1	38.6
Total	1,570	1,958	2,087	2,424	2,421	2,265	2,227	2,018	2,514	2,511	2,199	100.0	
Michigan													
Pea	2,492	3,519	2,735	4,076	4,990	3,069	3,782	3,202	3,428	2,946	3,424	93.2	92.6
Red Kidney	15	35	34	40	108	81	108	92	87	120	72	2.0	5.8
Cranberry	87	69	55	111	331	121	72	85	135	76	114	3.1	85.1
Pinto									10	72	8	0.2	0.2
Others	56	45	23	31	73	41	60	95	90	40	55	1.5	6.4
Total	2,650	3,668	2,847	4,258	5,502	3,312	4,022	3,474	3,750	3,254	3,673	100.0	
Montana													
Great Northern	173	235	256	272	233	104	60	46	50	50	148	73.6	5.8
Pinto	1					36	63	59	119	186	46	22.9	1.4
Other	32	13	11	12							7	3.5	0.8
Total	206	248	267	284	233	140	123	105	169	236	201	100.0	
Nebraska													
Great Northern	664	958	998	1,339	1,160	686	556	849	825	937	897	86.9	34.9
Pinto	26	29	31	29	31	176	168	214	361	289	135	13.1	4.0
Total	690	987	1,029	1,368	1,191	862	724	1,063	1,186	1,226	1,032	100.0	

TABLE 4 - continued

Production by Principal States and Major Classes 1945-54
(Thousands of cwt. - Cleaned)

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	10-yr. Average	% of State Prod.	% of U.S. Prod. for class
New Mexico													
Pinto	273	240	312	405	556	194	110	142	148	205	258	98.9	7.7
Others	3	3	3	3	4	3	4	3			3	1.1	0.3
Total	276	243	315	408	560	197	114	145	148	205	261	100.0	
New York													
Pea	115	249	289	354	291	218	242	152	156	158	222	15.8	6.0
Red Kidney	464	1,090	948	1,516	1,125	942	1,024	1,151	1,059	953	1,027	73.1	82.7
Others	71	82	84	200	156	162	176	245	205	176	156	11.1	18.2
Total	650	1,421	1,321	2,070	1,572	1,322	1,442	1,548	1,420	1,287	1,405	100.0	
Washington													
Pea	23	12	24	15	12	33	15	13	12	10	17	7.9	0.5
Great Northern					6	1				14	2	0.9	0.1
Pinto					11	20	10	5	68	83	20	9.3	0.6
Pink						2	17	15	12	18	6	2.8	1.3
Small Red					89	155	217	139	287	652	154	71.6	26.1
Other	22	27	19	54	1	15	9	5	5		16	7.5	1.9
Total	45	39	43	69	119	226	268	177	384	777	215	100.0	
Wyoming													
Great Northern	759	994	1,129	1,068	806	463	318	484	426	481	693	70.9	27.0
Pinto	115	126	153	110	279	313	345	254	447	399	254	26.0	7.6
Other	72	94	46	19	23	11	11	9	14	3	30	3.1	3.5
Total	946	1,214	1,328	1,197	1,108	787	674	747	887	883	977	100.0	
												% of U.S. Production	
U.S. Total 1/													
Pea	2,687	3,814	3,074	4,476	5,334	3,356	4,072	3,412	3,607	3,131	3,696	22.9	
Great Northern	2,481	3,440	3,554	4,039	3,204	1,724	1,484	1,927	1,819	2,009	2,568	15.9	
Small White	390	360	514	734	625	466	736	540	560	698	562	3.5	
Pinto	2,063	2,105	3,278	3,091	3,853	3,623	3,002	3,168	4,868	4,567	3,362	20.8	
Red Kidney	555	1,231	1,111	1,742	1,392	1,123	1,344	1,421	1,287	1,210	1,242	7.7	
Pink	269	333	453	556	634	336	534	393	450	656	461	2.8	
Small Red	229	307	473	496	654	486	768	605	666	1,219	590	3.7	
Cranberry	102	76	72	135	371	133	85	108	163	94	134	0.8	
Large Lima	910	782	855	1,144	1,376	1,225	1,168	1,360	1,137	1,259	1,122	6.9	
Baby Lima	1,007	1,055	1,058	984	1,272	1,132	798	430	639	758	913	5.7	
Blackeye	407	392	638	1,087	318	611	918	647	767	703	649	4.0	
Other	850	807	749	900	830	913	970	999	855	699	857	5.3	
Total	11,950	14,702	15,829	19,384	19,863	15,128	15,879	15,010	16,818	17,003	16,156	100.0	

1/ Includes production in minor States

CSS-Grain
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TABLE 5

DRY EDIBLE BEANS
Supply-Distribution for Marketing Years 1/
(1000 bags of 100 lbs. each - cleaned basis)

Year	Supplies				Utilization			
	Beginning Stocks	Imports	Production	Total Supplies	Domestic Disappearance	Exports	Total Disappearance	Ending Stocks
1920	2,000	N.A.	5,809	7,809	4,976	833	5,809	2,000
1921	2,000	484	5,772	8,256	7,126	630	7,756	500
1922	500	1,136	7,324	8,960	7,850	410	8,260	700
1923	700	419	8,955	10,074	8,053	431	8,484	1,590
1924	1,590	1,196	8,410	11,196	10,273	323	10,596	600
1925	600	1,070	10,755	12,425	10,727	398	11,125	1,300
1926	1,300	1,115	9,669	12,084	10,225	379	10,604	1,480
1927	1,480	1,860	9,108	12,448	11,590	288	11,878	570
1928	570	1,009	9,900	11,479	11,031	198	11,229	250
1929	250	1,874	11,561	13,685	12,551	204	12,755	930
1930	930	980	13,540	15,450	13,185	200	13,385	2,065
1931	2,065	164	11,970	14,199	12,428	109	12,537	1,662
1932	1,662	206	10,410	12,278	10,938	90	11,028	1,250
1933	1,250	259	12,065	13,574	11,493	81	11,574	2,000
1934	2,000	503	10,656	13,159	11,939	70	12,009	1,150
1935	1,150	265	13,333	14,748	13,524	104	13,628	1,120
1936	1,120	703	10,767	12,590	11,621	44	11,665	925
1937	925	199	14,940	16,064	13,510	104	13,614	2,450
1938	2,450	141	14,717	17,308	13,841	317	14,158	3,150
1939	3,150	143	14,254	17,547	13,191	906	14,097	3,450
1940	3,450	241	15,790	19,481	14,417	1,564	15,981	3,500
1941	3,500	164	17,100	20,764	14,359	1,832	16,191	4,573
1942	4,573	452	17,568	22,593	16,079	2,933	19,012	3,581
1943	3,581	1,467	19,435	24,483	15,742	4,430	20,172	4,311
1944	4,311	470	15,044	19,825	14,353	4,519	18,872	953
1945	953	186	11,950	13,154 2/	11,526	1,269	12,795	359
1946	359	147	14,702	15,208	13,039	1,469	14,508	700
1947	700	390	15,829	17,038 2/	13,579	2,729	16,308	730
1948	730	395	19,384	20,649 2/	13,162	1,917	15,079	5,570
1949	5,570	318	19,863	25,751	14,844	772	15,616	10,135
1950	10,135	148	15,128	25,411	15,875	2,611	18,486	6,925
1951	6,925	255	15,879	23,059	14,563	3,546	18,109	4,950
1952	4,950	252	15,010	20,212	14,685	3,348	18,033	2,179
1953	2,179	179	16,818	19,176	14,803	2,200	17,003	2,173
1954	2,173	216	17,003	19,392	14,776	1,739	16,515	2,877
Averages								
1920-29	1,099	1,016	8,726	10,841	9,440	409	9,849	992
1930-39	1,670	356	12,665	14,691	12,567	202	12,769	1,922
1940-49	2,773	423	16,666	19,894 2/	14,110	2,343	16,453	3,441
1950-54	5,272	210	15,968	21,450	14,940	2,689	17,629	3,821

1/ Sources: Production, Crop Reporting Board
Exports and Imports, U.S. Dept. of Commerce
Stock and disappearance figures - Grain Division, CSS estimates in most instances

2/ Includes split bean exports not included in production in following amounts:
1945 - 65,000; 1947 - 119,000; 1948 - 140,000.

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TABLE 6

DRY EDIBLE BEANS
Weighted Season Average Price Received by Farmers 1930-1954 1/
(Dollars per 100 lbs.)

Year	New York	Mich.	Nebr.	Mont.	Idaho	Wyoming	Colo.	New Mexico	Wash.	Calif.	U.S.
1930	5.30	4.35	4.95	4.90	3.80	4.30	2.80	3.05	5.60	4.35	4.03
1931	2.30	1.80	3.15	1.85	1.70	1.75	1.40	1.65		2.70	2.08
1932	1.90	1.50	2.30	1.70	1.50	1.80	2.20	2.05		3.10	1.97
1933	3.10	2.25	2.95	2.35	2.20	2.55	2.90	2.90		3.45	2.78
1934	3.40	2.75	4.25	3.25	3.15	3.70	5.50	5.60		4.25	3.51
1935	3.00	2.25	3.35	2.75	2.55	2.85	2.75	2.90		4.00	2.95
1936	6.40	6.00	4.65	4.70	4.75	5.00	4.45	4.55		5.40	5.37
1937	3.30	2.55	3.20	2.70	2.45	2.75	3.80	3.85	4.15	3.45	3.10
1938	2.60	1.85	2.70	2.05	1.80	2.10	3.30	3.65	3.50	3.15	2.56
1939	3.45	2.80	3.35	2.85	2.60	3.00	3.40	3.60	4.30	3.85	3.25
1940	4.25	3.50	2.65	2.70	2.40	2.40	2.45	2.40	3.80	3.50	3.18
1941	5.40	4.55	3.80	3.65	3.60	3.70	3.40	3.50	5.00	5.40	4.55
1942	5.10	4.80	4.80	4.70	4.75	4.60	4.65	4.90	5.60	6.10	5.16
1943	6.10	5.90	5.70	5.70	5.60	5.70	5.70	5.70	5.90	6.80	6.05
1944	6.50	6.00	5.90	6.10	5.80	6.00	5.90	5.90	6.00	7.20	6.28
1945	7.10	6.20	6.10	6.20	6.20	6.10	5.50	5.60	6.30	7.70	6.56
1946	11.10	9.60	8.70	8.70	10.20	8.80	11.90	11.40	9.20	12.50	10.60
1947	11.90	12.40	9.30	9.20	9.20	9.30	10.10	9.10	12.20	14.80	11.60
1948	7.80	7.20	7.00	7.40	6.90	7.00	7.10	7.20	8.30	9.70	7.87
1949	6.90	5.90	5.80	5.80	5.90	5.80	6.50	6.40	6.90	8.10	6.59
1950	7.90	6.70	6.40	6.20	7.00	6.30	6.50	6.60	7.70	9.00	7.44
1951	9.50	6.90	7.30	6.40	7.60	7.00	6.70	6.80	7.70	9.00	7.91
1952	8.80	7.70	7.70	7.30	8.70	7.60	8.20	7.80	8.90	10.10	8.67
1953	8.40	7.90	7.60	7.00	7.50	7.30	7.10	7.60	7.90	9.70	8.15
1954 2/	9.10	9.30	7.10	6.00	7.00	6.60	6.30	6.50	6.90	9.00	8.03
Averages											
1930-39	3.47	2.81	3.48	2.91	2.65	2.98	2.98	3.38	4.39	3.77	3.16
1940-49	7.21	6.60	5.97	6.01	6.05	5.94	6.32	6.21	6.92	8.18	6.84
1950-54	8.74	7.70	7.22	6.58	7.56	6.96	6.96	7.06	7.82	9.36	8.04

1/ Source: Crop Reporting Board, AMS
2/ Preliminary

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TABLE 7

DRY EDIBLE BEANS: U.S. Price Support Operations and Price Analysis
(For all Classes Combined, Cleaned Basis)

Year Beginning Sept. 1	Production	Price Support Operations: Owned by CCC on Sept. 1	Under Price Support: Loans	Under Price Support: Purchase Agreements	Under Price Support: Total	Under Price Support: Percent of Crop	Deliveries to CCC	National Average Price Support Level: Parity for Price Support 1/	National Average Price Support Level: Support Rate per Cwt. 2/	National Average Price Support Level: Support Rate as Percent of Parity	National Average Price Received by Farmers Compared with Parity: Parity, Beginning Marketing Year 3/	Season Avg. Price Recd. by Farmers	Price Recd. by Farmers as Percent of Parity
	1	2	3	4	5	6	7	8	9	10	11	12	13
	(1000 Cwt.)	(1000 Cwt.)	(1000 Cwt.)	(1000 Cwt.)	(1000 Cwt.)	(Percent)	(1000 Cwt.)	(Dollars)	(Dollars)	(Percent)	(Dollars)	(Dollars)	(Percent)
1932-33	10,410										4.15	1.97	47
1933-34	12,065										4.11	2.78	68
1934-35	10,656										4.38	3.51	80
1935-36	13,333										4.31	2.95	68
1936-37	10,767										4.35	5.37	123
1937-38	14,940										4.48	3.10	69
1938-39	14,717										4.21	2.56	61
1939-40	14,254										4.11	3.25	79
1940-41	15,790										4.21	3.18	76
1941-42	17,100	4/ 802							5/ 5.00		4.48	4.55	102
1942-43	17,568	4/ 1,462						5.06	4.55	90	5.06	5.16	102
1943-44	19,435	4/ 2,452	455		455	2.3		5.49	4.94	90	5.46	6.05	111
1944-45	15,044	4/ 3,968						5.70	5.13	90	5.66	6.28	111
1945-46	11,950	4/ 298						5.80	5.22	90	5.76	6.56	114
1946-47	14,702	4/ 21						6.81	6.13	90	6.71	10.60	158
1947-48	15,829	0	1		1	.006		7.92	7.13	90	7.82	11.60	148
1948-49	19,384	0	4,048	4,292	8,340	43.0	5,117	8.46	7.60	90	8.39	7.87	94
1949-50	19,863	4,832	7,214	1,665	8,879	44.7	6,066	8.19	6.55	80	8.16	6.59	81
1950-51	15,128	9,803	1,348	265	1,613	10.7	784	8.32	6.30	75	8.62	7.44	86
1951-52	15,879	6,037	2,557	524	3,081	19.4	1,830	8.92	6.69	75	9.25	7.91	86
1952-53	15,010	4,033	1,587	628	2,215	14.8	789	9.18	7.80	85	9.18	8.67	94
1953-54	16,818	1,369	3,352	923	4,275	25.4	1,649	8.99	7.79	87	8.84	8.15	92
1954-55	17,003	1,554	3,485	515	4,000	23.5	3,001	9.05	7.24	80	9.05	6/ 8.03	89
1955-56	7/ 17,464	2,670						9.08	6.36	70	8.96		
1956-57													

1/ Parity prices shown, from which the support rates were computed, are prices originally reported by AMS for classes combined. AMS does not report parity prices by classes.
2/ Support prices for dry edible beans are set, cleaned basis f.o.b. country shipping points, for selected classes.
3/ Generally mid-August parity prices.
4/ These beans obtained by direct purchase.
5/ Support for 1941 crop was announced basis Atlantic Seaboard positions.
6/ Preliminary.
7/ Preliminary, derived from October 1, 1955, crop report of uncleaned beans.

GRAIN DIVISION, CSS
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TABLE 8

DRY EDIBLE BEANS
Price Support Operations by Principal States (1948-1954)
(cwt. - Cleaned Beans)

Crop	Production	Loans	Purchase Agreements	Total	% of Crop	Loan Deliveries to CCC	% of Crop
			Arizona				
1948	61,000	25,645	2,346	27,991	46	11,165	18
1949	54,000	31,920	2,226	34,146	63	29,510	55
1950	55,000	16,155	-	16,155	29	12,086	22
1951	27,000	8,805	-	8,805	33	-	0
1952	27,000	6,986	-	6,986	26	-	0
1953	39,000	10,346	-	10,346	27	7,968	20
1954	44,000	23,623	6,950	30,573	69	11,531	26
Totals	307,000	123,480	11,522	135,002	44	72,260	24
			California				
1948	4,960,000	497,464	917,952	1,415,416	29	428,946	9
1949	4,696,000	1,339,205	496,519	1,835,724	39	1,030,973	22
1950	4,138,000	356,873	200,605	557,478	13	296,927	7
1951	4,709,000	544,916	284,890	829,806	18	470,649	10
1952	3,873,000	336,830	286,591	623,421	16	201,740	5
1953	3,985,000	382,317	396,837	779,154	20	278,300	7
1954	4,610,000	825,519	292,797	1,118,316	24	743,476	16
Totals	30,971,000	4,283,124	2,876,191	7,159,315	23	3,451,011	11
			Colorado				
1948	2,146,000	675,877	313,909	989,786	46	568,431	26
1949	2,274,000	915,374	54,318	969,692	43	560,218	25
1950	1,741,000	448,881	12,718	461,599	27	120,520	7
1951	1,469,000	311,237	5,107	316,344	22	11,363	1
1952	1,747,000	308,165	1,877	310,042	18	-	0
1953	2,192,000	693,039	55,733	748,772	34	219,134	10
1954	1,881,000	724,144	57,502	781,646	42	544,462	29
Totals	13,450,000	4,076,717	501,164	4,577,881	34	2,024,128	15
			Idaho				
1948	2,424,000	525,968	671,908	1,197,876	49	458,888	19
1949	2,421,000	781,519	148,679	930,198	38	593,941	25
1950	2,265,000	206,422	5,570	211,992	9	87,142	4
1951	2,227,000	259,068	26,620	285,688	13	24,546	1
1952	2,018,000	207,754	10,470	218,224	11	23,963	1
1953	2,514,000	700,414	100,620	801,034	32	289,181	12
1954	2,511,000	748,094	121,155	869,249	35	668,293	27
Totals	16,380,000	3,429,239	1,085,022	4,514,261	28	2,145,954	13
			Michigan				
1948	4,258,000	259,223	1,011,979	1,271,202	30	242,900	6
1949	5,502,000	2,379,233	611,048	2,990,281	54	2,070,759	38
1950	3,312,000	13,160	38,148	51,308	2	7,124	1/
1951	4,022,000	1,223,183	202,947	1,426,130	35	1,130,375	28
1952	3,474,000	386,712	247,697	634,409	18	247,886	7
1953	3,750,000	440,682	175,643	616,325	16	230,657	6
1954	3,254,000	56,893	1,480	58,373	2	0	0
Totals	27,572,000	4,759,086	2,288,942	7,048,028	26	3,929,701	14
			Montana				
1948	284,000	115,704	28,351	144,055	51	114,592	40
1949	233,000	131,590	7,699	139,289	60	114,839	49
1950	145,000	30,474	221	30,695	21	7,864	5
1951	123,000	14,163	726	14,889	12	5,293	4
1952	105,000	20,715	-	20,715	20	6,654	6
1953	169,000	40,555	4,261	44,816	27	31,084	18
1954	236,000	68,482	8,317	76,799	33	63,560	27
Totals	1,295,000	421,683	49,575	471,258	36	343,886	27

Price Support Operations by Principal States (1948-1954)
(cwt. - Cleaned Beans)

Crop	Production	Loans	Purchase Agreements	Total	% of Crop	Loan Deliveries to CCC	% of Crop
			Nebraska				
1948	1,368,000	576,775	250,264	827,039	60	535,230	39
1949	1,191,000	378,488	45,408	423,896	36	323,176	27
1950	862,000	40,775	724	41,499	5	4,573	1
1951	724,000	26,257	752	27,009	4	9,324	1
1952	1,063,000	71,206	4,143	75,349	7	6,750	1
1953	1,186,000	232,266	65,646	297,912	25	4,786	-
1954	1,226,000	144,085	2,744	146,829	12	16,827	1
Totals	7,620,000	1,469,852	369,681	1,839,533	24	900,666	12
			New Mexico				
1948	408,000	162,160	27,267	189,427	46	149,100	37
1949	560,000	235,329	9,009	244,338	44	161,533	29
1950	197,000	27,012	4,660	31,672	16	13,810	7
1951	114,000	18,854	-	18,854	17	451	1/
1952	145,000	9,339	-	9,339	6	-	0
1953	148,000	26,569	225	26,794	18	15,635	11
1954	205,000	90,746	3,842	94,588	46	90,381	44
Totals	1,777,000	570,009	45,003	615,012	35	430,910	24
			New York				
1948	2,070,000	533,373	798,591	1,331,964	64	526,596	25
1949	1,572,000	292,692	250,057	542,749	35	273,313	17
1950	1,322,000	1,158	1,350	2,508	1/	-	0
1951	1,442,000	2,222	225	2,447	1/	-	0
1952	1,548,000	5,393	72,103	77,496	5	3,500	1/
1953	1,420,000	321,706	92,839	414,545	29	279,083	20
1954	1,287,000	749	6,600	7,349	1	-	0
Totals	10,661,000	1,157,293	1,221,765	2,379,058	22	1,082,492	10
			Washington				
1948	69,000	34,404	10,624	45,028	65	20,791	30
1949	114,000	7,700	9,320	17,020	15	-	0
1950	226,000	587	270	857	1/	-	0
1951	268,000	71,657	919	72,576	27	14,682	5
1952	177,000	25,669	2,400	28,069	16	-	0
1953	384,000	177,182	15,115	192,297	50	82,876	22
1954	777,000	494,883	6,740	501,623	65	467,462	60
Totals	2,015,000	812,082	45,388	857,470	43	585,811	29
			Wyoming				
1948	1,197,000	603,799	244,612	848,411	71	564,725	47
1949	1,108,000	704,070	27,471	731,541	66	616,948	56
1950	787,000	203,882	329	204,211	26	89,887	11
1951	674,000	71,996	725	72,721	11	15,545	2
1952	747,000	206,922	2,233	209,155	28	76,993	10
1953	887,000	319,313	10,180	329,493	37	134,933	15
1954	883,000	277,837	6,902	284,739	32	212,716	24
Totals	6,283,000	2,387,819	292,452	2,680,271	43	1,711,747	27

1/ Less than 0.5 percent

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TABLE 8-a

DRY EDIBLE BEANS
Summary of Price Support Operations (1948-1954)
(cwt. - Cleaned Beans)

Crop	Production	Loans	Purchase Agreements	Total	% of Crop U.S. Total	Loan Deliveries to CCC	% of Crop	Purchase Agreement Deliveries to CCC 1/	Total Deliveries to CCC	% of Crop
1948	19,384,000	4,048,138	4,290,493	8,338,631	43	3,651,200	19	1,443,139	5,094,339	26
1949	19,863,000	7,214,143	1,665,109	8,879,252	45	5,784,730	29	277,848	6,062,578	31
1950	15,128,000	1,348,355	264,595	1,612,950	11	640,671	4	142,888	783,559	5
1951	15,879,000	2,557,656	523,799	3,081,455	19	1,683,916	11	147,881	1,831,797	12
1952	15,010,000	1,587,507	627,544	2,215,051	15	568,060	4	220,886	788,946	6
1953	16,818,000	3,352,373	923,086	4,275,459	25	1,577,779	9	71,583	1,649,362	10
1954	17,003,000	3,484,654	515,600	4,000,254	24	2,842,690	17	158,044	3,000,734	18
Totals	119,085,000	23,592,826	8,810,226	32,403,052	27	16,749,046	14	2,462,269	19,211,315	16

1/ Not available by States

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TABLE 9

DRY FIELD PEAS
Planted Acreage by Principal States 1929-1955
(1000 acres)

Year	Montana	Idaho	Wyoming	Wash-ington	Oregon	California	U.S.
1929	23	58	-	45	-	-	250
1930	27	80	-	63	-	-	295
1931	32	89	-	75	-	-	312
1932	26	71	-	65	-	-	257
1933	21	84	-	100	-	-	294
1934	28	92	-	108	3	-	330
1935	36	105	-	150	4	-	370
1936	26	78	-	124	2	-	296
1937	20	60	-	140	1	-	276
1938	19	53	-	105	4	-	225
1939	18	53	-	119	2	-	238
1940	27	66	-	157	3	-	314
1941	32	104	-	154	10	-	379
1942	44	143	2	251	25	-	518
1943	62	250	2	394	54	-	825
1944	42	225	2	347	58	23	752
1945	32	155	2	246	39	23	549
1946	24	161	3	244	20	18	515
1947	17	153	2	256	25	27	544
1948	8	72	2	162	19	18	315
1949	7	99	2	210	17	17	383
1950	6	64	2	137	15	9	256
1951	5	84	7	188	13	4	327
1952	5	64	7	117	9	5	228
1953	6	93	6	132	14	6	282
1954	4	97	5	147	6	8	287
1955	6	90	4	179	6	6	309

Source: Crop Reporting Board, AMS

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TABLE 10

DRY PEAS
Production by States (Cleaned)

Year	Calif.	Idaho	Montana	Oregon	Wash-ington	Wyoming	Others	Total
1941		906	383	149	1,716		308	3,462
1942		1,598	476	510	3,863	21	288	6,756
1943		3,027	605	723	5,259	18	393	10,025
1944	214	2,513	370	564	3,991	17	351	8,020
1945	192	1,616	306	299	2,562	22	368	5,365
1946	148	1,916	229	209	3,200	34	338	6,074
1947	196	1,782	151	240	3,018	21	387	5,795
1948	158	722	80	206	1,857	21	254	3,298
1949	187	887	59	83	1,407	22	275	2,920
1950	80	843	73	138	1,690	21	106	2,951
1951	44	925	62	88	2,250	76	76	3,521
1952	74	781	61	78	1,129	132	122	2,377
1953	69	1,033	54	87	1,483	85	163	2,974
1954	87	1,032	48	42	1,664	87	117	3,077

TABLE 11

DRY PEAS
Production by Classes (Cleaned)

Year	Alaska & Other Smooth Green Peas	1st & Best White Canada & Other Yellow or White Seeded Kinds	Other Kinds Except Austrian Winter	Total
		(thousand 100 lb. bags)		
1944	5,864	1,064	1,092	8,020
1945	3,439	723	1,203	5,365
1946	4,124	716	1,234	6,074
1947	3,748	764	1,283	5,795
1948	2,170	421	707	3,298
1949	1,794	471	655	2,920
1950	1,913	313	725	2,951
1951	2,103	556	862	3,521
1952	856	557	964	2,377
1953	1,450	696	828	2,974
1954	1,482	587	1,008	3,077

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TABLE 12

DRY FIELD PEAS
Estimated Supply-Distribution, 1935-1954
(Cleaned Basis)

	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
Supplies										
Beginning Stocks	135	900	1,035	1,645	1,928	1,006	311	667	2,784	7,246
Production	2,974	2,484	2,835	1,472	1,718	2,017	3,462	6,756	10,025	8,020
Imports	36	17	32	18	13	19	30	26	58	6
Total	3,145	3,401	3,902	3,135	3,659	3,042	3,803	7,449	12,867	15,272
Disappearance										
Domestic	2,204	2,210	2,137	1,083	2,318	2,553	2,685	3,709	3,665	3,579
Exports	41	96	120	124	335	178	451	956	1,956	7,036
Total Disappearance	2,245	2,306	2,257	1,207	2,653	2,731	3,136	4,665	5,621	10,615
Ending Stocks	900	1,035	1,645	1,928	1,006	311	667	2,784	7,246	4,657

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Supplies										
Beginning Stocks	4,657	1,181	760	1,460	1,250	1,760	901	1,120	770	790
Production	5,365	6,074	5,820	3,298	2,920	2,951	3,521	2,377	2,974	3,077
Imports	34	13	90	90	120	50	70	100	90	150
Total	10,056	7,268	6,670	4,848	4,290	4,761	4,492	3,597	3,834	4,017
Disappearance										
Domestic	3,642	5,414	4,340	2,978	2,170	3,280	2,752	2,307	2,444	2,487
Exports	5,233	1,094	870	620	360	580	620	520	600	1,330
Total Disappearance	8,875	6,508	5,210	4,898	2,530	3,860	3,372	2,827	3,044	3,817
Ending Stocks	1,181	760	1,460	1,250	1,760	901	1,120	770	790	200

CSS-Grain
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TABLE 13

DRY FIELD PEAS
Weighted Season Prices Received by Farmers 1933-1954 1/
(Dollars per 100 lbs.)

Year	Montana	Idaho	Wyoming	Wash-ington	Oregon	California	U.S.
1933	2.80	2.75	2/	2.50	2/	2/	
1934	2.90	2.85	2/	2.60	3.00	2/	
1935	2.85	2.25	2/	2.00	2.00	2/	
1936	3.00	2.35	2/	2.10	2.40	2/	
1937	2.70	2.25	2/	1.35	1.40	2/	
1938	2.75	2.00	2/	1.45	1.55	2/	
1939	2.65	2.70	2/	2.40	2.50	2/	
1940	2.58	3.00	2/	3.50	3.25	2/	
1941	3.50	3.50	2/	3.50	3.25	2/	3.47
1942	3.75	4.70	4.70	4.50	4.60	2/	4.48
1943	5.10	5.10	6.20	4.85	4.70	2/	4.92
1944	5.20	5.10	6.20	4.90	4.70	6.00	4.98
1945	4.95	4.20	6.00	4.00	4.20	6.20	4.20
1946	5.60	4.95	7.00	4.70	4.90	6.40	4.89
1947	5.95	5.20	6.65	5.30	5.40	8.70	5.37
1948	5.80	5.15	6.00	4.70	5.10	6.75	4.94
1949	5.30	3.55	4.50	3.05	3.70	6.45	3.52
1950	4.05	3.50	5.00	3.45	3.75	5.20	3.56
1951	5.20	4.50	5.10	3.80	4.95	6.20	4.11
1952	5.30	5.30	5.50	5.20	5.10	6.30	5.26
1953	5.30	5.30	5.30	5.10	5.50	5.60	5.11
1954 3/	4.55	4.70	4.95	5.30	5.50	5.80	5.04

1/ Source: Crop Reporting Board, AMS. December 1 price for Montana, Oregon, and Washington prior to 1940
2/ Not available
3/ Preliminary

CSS-Grain
Agriculture-Washington
November 1955

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Market Development Branch

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MARKET DEVELOPMENT RESEARCH RELATING TO LAMB AND WOOL

Prepared for the Agricultural Outlook Conference, November 29, 1955, by: Harry O. Doty, Jr., Agricultural Economist, Merchandising Methods Section, Market Development Branch, Agricultural Marketing Service, United States Department of Agriculture.

Agriculture - Washington

MARKET DEVELOPMENT RESEARCH RELATING TO LAMB AND WOOL

Market development research must not be viewed as an overnight approach to the solution of agricultural surpluses. However, market development research can play an important role in assisting producing and distributing industries in improving or maintaining their economic position. When action is taken in attempting to expand markets--action based on marketing research--the results can be predicted with more accuracy and the dollar spent can be used more efficiently. An advertising or promotional campaign based on the results of research can be expected to produce more results in terms of dollar returns than is true of one not based on research. Merchandising practices adopted after they have been proven by research results are more likely to sell additional goods than practices adopted without the benefit of marketing research. New products put on the market after thorough market tests are more likely to achieve consumer acceptance than those not tested.

Market development research should be conceived as a basic tool of management--management not only of the producing and distributing concerns, but also of management of activities of the Department of Agriculture. In order for management to use this tool effectively, the research conducted must be of a type needed and desired by management. This means that after the final results of the research are achieved, such results are recognized by management as having been directed at pertinent problems, which will ease considerably the transition of research results into effective action.

As a result of the National Wool Act of 1954, it is anticipated that a considerable increase in wool and lamb production will take place in the next few years. Section 708 of the National Wool Act has been put into effect. It provides for the Secretary to set aside funds from payments to producers and to transfer these funds to approved persons or agencies for the purpose of developing and conducting advertising and sales promotional programs for wool and lamb and their products. program of research has been initiated in cooperation with the sheep industry for the purpose of providing them with basic information needed to develop an efficient program of merchandising, advertising, and promoting of their products.

Four lines of market development research relating to lamb and mutton are now under way in the Agricultural Marketing Service. One is a national consumer use and preference survey regarding women's uses of andpreferences for wool in certain items of apparel. The second is a similar use and preference study in one city, Cleveland, Ohio, for selected cuts of lamb and mutton. The third is a national survey of meat packers' shipments of lamb and mutton by States and regions of destination. The fourth is a national survey of a representative sample of retail stores to determine the availability of lamb and mutton, quantity handled, and various merchandising practices and problems encountered in retailing lamb and mutton.

The national wool study is designed to ascertain for all females, 18 years of age and older, the status of inter-fiber competition in women's suits, skirts, and sweaters--articles of women's clothing traditionally made of wool fabrics which have felt the greatest impact from man-made fibers. It will determine ownership of specific items of clothing, the fiber content of these items, preferences for fibers, attitudes associated with the selection of these items of clothing, and care and cleaning practices associated with these items of apparel. In addition, information will be obtained on use of fibers or fabrics in home sewing, hand knitting, and other home crafts.

The personal interviewing phase of this study is now being carried out.

The one-city lamb preference and use survey has as its purpose the evaluation of consumer preference for and attitudes toward fresh lamb in a selected marketing area (Cleveland, Ohio) where per capita consumption was believed to be relatively low. To date, little information has been available as to the factors which affect and influence home consumption of lamb. A thorough knowledge of the patterns of use and the opinions and attitudes toward lamb can indicate areas where additional attention will most likely be effective in improving sales of lamb and mutton, and will enable the industry to carry out its advertising and sales promotion activities more efficiently.

A probability sample was drawn to represent private households in Cleveland, Ohio, and interviews were taken with the homemakers in each household that fell into the sample. Interviewing took place during the last 3 weeks in June of this year.

We have not as yet completed analyzing all of the data; however, a few preliminary facts are available at this time.

1. By far, a majority of the lamb users in Cleveland (some 72 percent) said that they usually decide before going to the store what meats they are going to buy.

2. Lamb displays in the store appeared to be an important factor in the housewife's decision to buy lamb. About half of the lamb users said that they sometimes decide to buy lamb because of the display. Smaller proportions reported being influenced by newspaper advertising, suggestions from clerks or butchers, and radio or television advertising.

3. About two-fifths of the lamb users had served lamb to guests at some time in the past year. Frequent users of lamb were much more likely to have served lamb to guests than were the moderate or infrequent users.

4. Most of the housewives said they served lamb without regard to season. About one-third, however, reported serving more lamb during certain seasons of the year than at other times. The two seasons during which lamb was served more often were winter (because more meats are used and it's easier to use the oven) and spring (best lamb available then, according to homemakers).

5. Relatively few homemakers used lamb on special days or occasions, most considered it an everyday food item.

6. In addition to its not being restricted to any one season or occasion, lamb was found to be used with almost every conceivable form of vegetable, salad, or seasoning--in short, versatile enough to be used with any type of food.

A published report of this research will be issued early in 1956.

The national survey of the wholesale distribution of lamb and mutton for consumption by States and regions during 1954 was undertaken last summer. Meat packers slaughtering sheep and lambs for interstate shipment were surveyed and destinations of their shipments obtained. These data will provide indications of the variations in lamb and mutton consumption by regions and States. This information will enable the industry to orient their distribution, sales, and promotional activities more efficiently.

We have not completed the analysis of these data; however, preliminary information on distribution of lamb and mutton can be reported at this time.

Wholesale distribution of all domestically produced lamb and mutton carcasses and cuts in 1954 is indicated to have been concentrated heavily in three major regions: The Northeast, the Pacific Coast States, and to a lesser extent the East North Central States.

Nearly half of the lamb and mutton consumed in 1954 was used in the Northeastern States. Heaviest shipments were reported to New York, Massachusetts, Pennsylvania, and New Jersey.

The Northeast may be subdivided into the Middle Atlantic States (New York, Pennsylvania, and New Jersey) and New England. The Middle Atlantic States, with 20 percent of the United States population in 1954, accounted for nearly 37 percent of the total distribution of lamb. New England, with 6 percent of the United States population, accounted for over 12 percent of the total distribution.

The second major area of concentration of lamb and mutton for consumption was on the Pacific Coast, with 21 percent of the total supply available. California was the major recipient. Population in the Pacific Coast States in 1954 was only 10 percent of the United States total.

The third area of concentration was in the East North Central States, with approximately 15 percent of the total lamb and mutton available for consumption in this region. Illinois and Michigan, in that order, showed the largest availability in this group of States. Population for the region in 1954, however, represented 20 percent of the United States total.

Areas where lamb and mutton were consumed in relatively small amounts in 1954 included the South Atlantic States (5 percent of the United States total), the Mountain States (slightly under 4 percent of the total), the West North Central States (also under 4 percent of the total), the West South Central States (with 2 percent of the total), and East South Central States (with less than 1 percent of the total). Altogether, these five State groups, representing 44 percent of the United States population, accounted for only 15 percent of the total lamb and mutton available for consumption in 1954.

A published report of this research will be issued early in 1956.

The fourth item of market development research presently under way in the field of livestock products is a study of the availability in retail food stores of lamb and mutton and certain of the practices followed in merchandising these meats. This study will give some indications as to whether availability is a limiting factor in purchases of this kind of meat.

A satisfactory pretest of this survey in 237 retail food stores has been completed. A national sample of 6,000 retail food stores has been selected from the following merchandise lines as defined in the Census of Business: (1) Groceries with fresh meats; (2) meat markets; (3) fish markets; (4) delicatessens; (5) other food stores; and (6) general stores. This sample will include about 1,200 large chain stores; 1,200 other chain and large independent stores; and 3,600 other independent stores. This survey is now being conducted in the field.

Data collected in the survey are to be tabulated separately by four major census regions--Northeast, North Central, South, and West. There will be three "breaks" within regions based on population density; that is, essentially, results will be shown separately for large metropolitan areas, smaller cities, and towns and rural areas.

Once the data have been collected, they will be analyzed and a report published.

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Agricultural Marketing Service
Marketing Research Division

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MARKET DEVELOPMENT RESEARCH STUDIES FOR THE RICE INDUSTRY 1/

The Market Development Branch, Agricultural Marketing Service, is proposing to undertake a number of market research studies to determine whether or not the domestic consumption of rice can be increased. At this time, there is some preliminary work under way to determine the areas of endeavor where marketing research is needed most. While there has always been a domestic problem in marketing rice, the problem has been accentuated by the large unsold supplies remaining over from the 1954 crop.

In the recent past, one of the rice industry's principal outlets has been the foreign market. This market is in jeopardy and its future uncertain. Naturally the research programs and the activities of the Foreign Agricultural Service and the various legislative programs to promote and expand world trade are and will be of material benefit to rice, as they are to other commodities. However, the domestic market for rice has long been neglected. It is the opinion of many that possibilities exist for significant expansion of this market. It is also believed that, in view of the small usage of rice in this country, increases necessary to alleviate the rice problem will not cause any serious consequences to other cereals or carbohydrate foods.

Market expansion will involve promotion, aggressive selling, an efficient marketing system and efficient marketing practices, the marketing of a product that will meet with consumer acceptance, and merchandising practices that will enhance sales appeal. Marketing research is needed and will be of great value in all of those phases. However, basic to the analysis of specific marketing problem, the interpretation of the needs and desires of the market, and to the sound direction of sales and promotion programs is the development of fundamental information on the characteristics of the market as it now exists. Data on present rice distribution will be developed and published on the smallest market area level practicable. These data will include type of rice, kind of buyer, and package information.

The development and publication of these data would point up where the rice industry stands with respect to location and size of markets and variations between markets. It would show trends in utilization, trends in packaging, and changes between markets. It can highlight the areas to concentrate on in sales promotion programs. It can show the individual seller, from his knowledge of his own operations, just how he stands and whether he has gained or lost and where, in relation

1/ Prepared for the 1955 Agricultural Outlook Conference, November 28-December 1, 1955.

Agriculture - Washington

to the total market picture. Thus, it can serve as the basis for sound marketing decisions. It can pinpoint specific marketing problems and aid in more accurate appraisals and analyses of possibilities to overcome them.

In developing fundamental data on the market for rice, it will be especially valuable to determine characteristics of rice consumers. Information on the size and frequency of purchases in relation to income, places of residence, national origin, and occupation, among other characteristics, would provide useful supplementary data to that on distribution patterns. It would be particularly helpful, in ascertaining some of the factors affecting rice consumption, to determine differences in characteristics of users of large, medium, and small quantities of rice, providing guides to the direction that efforts to promote consumption should take, and showing some of the reasons for variations in consumption patterns between areas.

It is known that there are large variations in per capita consumption of rice between local markets located even within the same general geographical area. The extent of such variations is not known and neither are the reasons for variations clearly understood. It would be of great value more specifically to appraise the factors associated with relatively high consumption in a local market or two and those associated with relatively low consumption. Such studies, in addition to the collection of data outlined previously, should provide more definite guides as to product improvements necessary, the direction that educational and promotional activities should take, and changes in marketing practices required to encourage increased consumption in markets where rice distribution is small.

Mention has been made of the marketing of a product that will meet with consumer acceptance and merchandising practices that will enhance sales appeal. A question at present involves enrichment of rice. Only limited quantities of rice are being marketed in this country that has been enriched by the addition of vitamins. Parboiled rice, which because of its processing retains a certain percentage of the vitamin content of rough rice, is being marketed by a few companies. Indications as to whether or not consumers will buy an enriched product and the price differential they will pay may be obtained through store experiments. Followups of purchases of the enriched product would be helpful to ascertain if the enriched product is satisfactory from the standpoint of cooking, appearance after cooking, and taste properties.

Other work directed at determining the possibilities for broadening rice markets would concern new rice products. At the present, these include such products as rice curls and canned rice. Consumer testing and market testing might be undertaken to ascertain the possibilities these products offer in increasing total rice consumption.

In addition, another study would involve the determination of the market potential for rice in the brewing industry. Recently increased quantities of broken rice have been going into this outlet. It is important to ascertain the competitive position of rice in this market and what probable future trends in rice utilization will be. A large dependable market for broken rice might lead indirectly to the marketing of a higher quality rice for household consumption in that the percentage of broken rice in consumer purchases might be reduced.

The projects outlined above largely concern market development. There is a great need for other marketing research on possibilities for reducing marketing costs, increasing the efficiency of the marketing system, and improving marketing practices. These are directly related to market development and could have an important effect on the success achieved in increasing the consumption of rice.

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Agricultural Research Service



Agricultural Research Center, Beltsville, Maryland

PROGRAM
for
AGRICULTURAL ATTACHE GROUP
November 18, 1955

Henry Buckhardt
Agricultural Attache, Seoul, Korea

Howard Akers
Asst. Agricultural Attache, Toyko, Japan

Jacob L. Mayton
Agricultural Officer, Salisbury, Southern Rodesia

William R. Hatch
Agricultural Attache, Teran, Iran

Leo G. Bodensteiner
Agricultural Officer, Calcutta, India

8:00	Leave Washington, D. C.
9:00	Conference Room, Southern Building PLANT INDUSTRY STATION
9:00 - 10:00	Conference on Training, Consultation and Support in Technical Assistance Programs Available in USDA.

Technical Consultants:

O. S. Aamodt, Crops Research
F. G. Bell, Farm & Land Mgt. Research
Zelta F. Rodenwold, Home Economics Res.
E. C. Jones, Livestock Research
H. L. Hyland, Plant Introductions
E. J. Hambleton, Plant Pest Control

10:00 - 11:00 Tour of Field and Horticultural Crops Research Work.

W. W. Diehl

11:15 - 12:30 DAIRY BARNS

Demonstration and Tour of Research Studies in the Breeding of Dairy Cattle.

T. W. Moseley

12:40 - 1:15 Lunch - Log Lodge

1:20 - 2:00 HOME ECONOMICS

Film - "Research for Better Living"
Step-Saving Kitchen
Miscellaneous Exhibits

Zelta F. Rodenwold

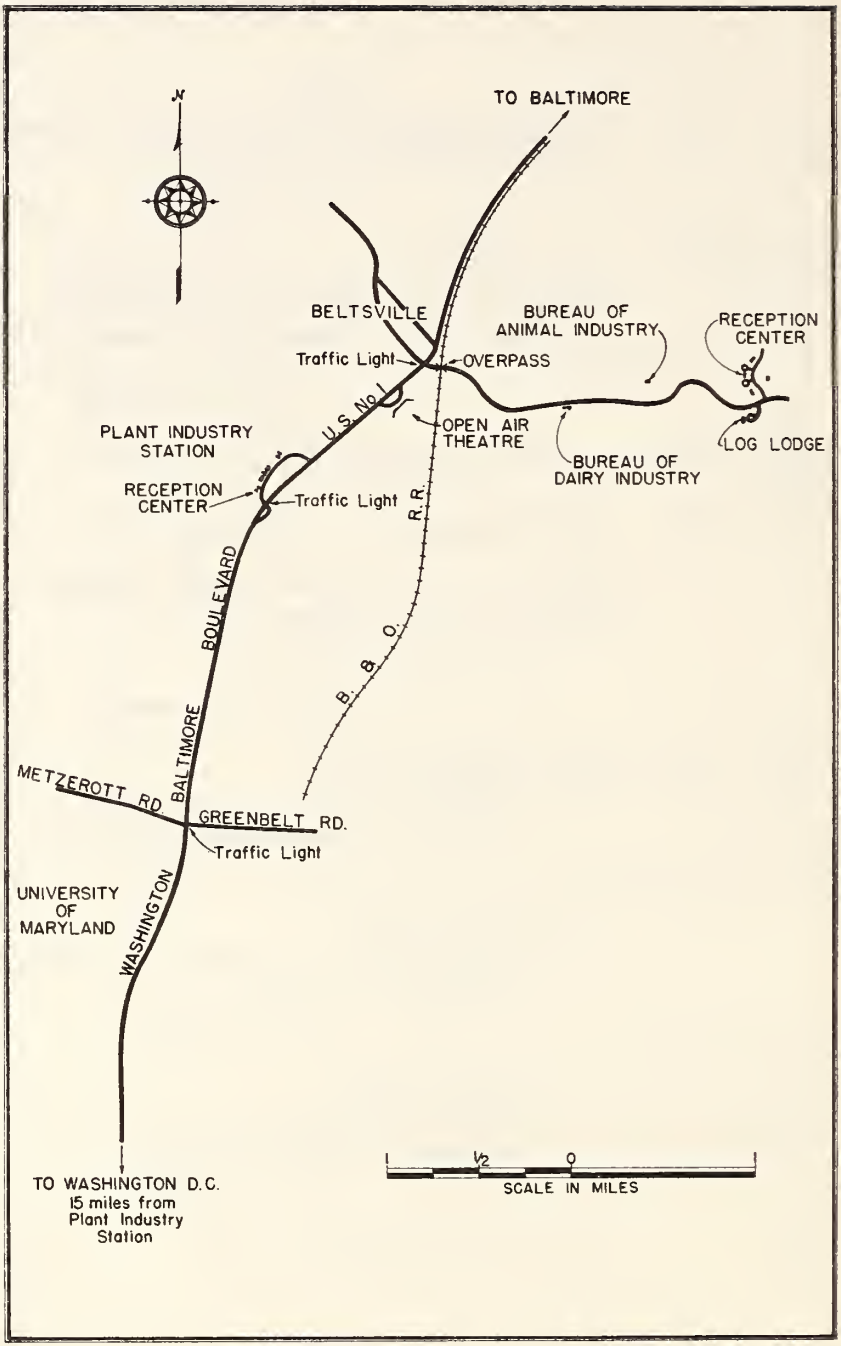
2:10 - 4:00 (1) POULTRY PLANT
Poultry Breeding and Feeding with trip through Poultry Yards.
J. P. Quinn

(2) BEEF BARNS
Beef Nutrition, including a visit to Barns and Yards.
V. L. Simmons

(3) SWINE BARNS
Swine Breeding and Feeding and Work at the Swine Barns.
V. L. Simmons

4:15 Lv. for Washington, D. C.

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TO BALTIMORE
BELTSVILLE
BUREAU OF ANIMAL INDUSTRY
RECEPTION CENTER
Traffic Light
OVERPASS
U.S. No. 1
PLANT INDUSTRY STATION
OPEN AIR THEATRE
LOG LODGE
BUREAU OF DAIRY INDUSTRY
RECEPTION CENTER
Traffic Light
R.R.
BOULEVARD
B. & O.
BALTIMORE
METZEROTT RD.
GREENBELT RD.
Traffic Light
UNIVERSITY OF MARYLAND
WASHINGTON
TO WASHINGTON D.C.
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Plant Industry
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Remarks of
Thorsten V. Kalijarvi
Deputy Assistant Secretary of State for Economic Affairs
At 1955 Annual Agricultural Outlook Conference
Washington, D.C., November 28, 1955

The World Economic Situation

Mr. Chairman, and Members of the 1955 Annual Agricultural Outlook Conference:

It is a privilege and a challenge to be a part of this conference of knowledgeable participants.

Dealing with the world economic situation is a little like trying to follow the design of a kaleidoscope. The bits and pieces remain constant but the pattern is always changing depending on the viewpoint from which the kaleidoscope is regarded. With this in mind, I thought it might be helpful to say something first about the basic pieces that go to make up the economic patterns and then describe one or two of the patterns.

Western Europe:

Let us begin with Western Europe. This is an area characterized by high industrial skills, a dynamic economic philoscphy, and a political climate conducive to high-level production. This area has experienced a spectacular economic upswing since the fall of 1952, and signs are now appearing which suggest that the slack in industrial capacity and manpower may be largely taken up.

A highly significant facet of the post-war recovery of Western Europe is revealed by a close look at the prime sources of support of continued expansion in different periods. Right after the war, expansion was chiefly promoted by the reconstruction expenditures of governments. After Korea, government spending -- this time in the form of defense spending -- was again the impelling force raising the level of economic activity. A slackening occurred from mid 1951 to late 1952. Then expansion resumed and its moving force was the private expenditure of European investors and consumers. It is heartening to see this solid evidence of Europe's economic strength and of European citizens' confidence in Europe's destiny.

From

From mid 1952 to mid 1955, the Western European countries in the OEEC -- The Organization for European Economic Cooperation -- raised the total volume of their exports by more than 20 per cent, their industrial production about 15 per cent, and their gold and dollar reserves over 25 per cent. Except in the United Kingdom, hard currency reserves in Western Europe are at comfortable levels, in fact at record highs. For the first time in the postwar period the rapid economic expansion was accompanied by relative stability in wages and prices and by conservative monetary and fiscal policies. Many of the countries have undertaken extensive measures to free international trade and payments and to remove internal economic controls. Furthermore this boom was marked by substantial increases in capital investment and housing, and a rise in the production of durable consumer goods involving heavy installment credit finance.

During the last year, however, storm warnings have gone up signaling a danger that Western Europe may be straining the limits of its present capacity. The rate of expansion has been slowing down, and inflationary pressures seem to be increasing.

The high levels of economic activity caused a sharp rise in imports, largely those from the dollar area. The general trade deficit of the combined OEEC countries increased by 50 per cent in the first five months of 1955 and the rise in the dollar trade deficit in the first quarter of 1955 was even greater. The rate of increase in gold and dollar reserves has slowed down, reflecting a deterioration of the position of the U.K. and the sterling area.

Industrial production has held up but has begun to level off. By the first quarter of this year, the curve of industrial output for Norway, Denmark, and Sweden flattened out altogether and the curves for the U.K. and France look as though they may be starting to flatten also.

Wages and prices have recently risen sharply in several countries, notably the U.K. and a threat of similar increase exists in Germany.

The storm warnings are not going unheeded by European governments.

British Government raised its bank rate to 4 1/2 per cent, invoked restrictions on installment credit, trimmed the investment programs of the nationalized industries and of the

central

central government, and requested local authorities to take similar action.

The Federal Republic of Germany is concerned lest higher prices for imported scarce products, especially coal, and higher wages will push up prices and deteriorate Germany's competitive position. However, Germany's strong external position makes it possible to keep the price level under pressure through increased imports. Monetary and fiscal policy are likely to remain strongly conservative. And inflationary pressures among Germany's competitors are more immediate and stronger. In addition, the slow start on the German rearmament program may very well reduce the overall demand on the economy below originally anticipated levels. Thus, the German anxieties may be exaggerated.

The Far East:

Another piece in our kaleidoscope is the Far East. Like Europe, this area was drastically affected by World War II. Moreover, the free world and the Communist countries of the area have suffered from the economic impact of later military conflicts. If pressed for a one-sentence summary of the economic situation of the free nations of this area, I would say that the past record has not been too bright but that the economic picture is on the whole more encouraging today.

All the nations of the Far East have very low standards of living from our viewpoint. Most are new countries which have emerged from colonial status since the war. With the notable exception of Japan, they have on the whole been suppliers of raw materials and importers of manufactured goods. However, many of them now feel that they must attain a greater degree of industrial self-sufficiency as an essential factor in their national independence.

Virtually all of the countries of the Far East suffered severe damage during World War II and in every case economic patterns of long standing were disrupted. Nearly all of the free countries suffered also from Communist disruptive tactics ranging from planned rioting and strikes to armed uprising, civil war and invasion.

Let us consider the area in five parts -- Japan, Korea, the Republic of China, Communist China, and then South East Asia.

Japan:

Japan:

Japan is a nation in which the pressure of population on arable land is one of the highest in the world. Japan must trade to be able to maintain even a standard of living which is low in comparison with the West. And in the post-war period Japan's customary economic problems have been intensified due to loss of markets in China and a low level of trade with Korea and South East Asia.

Japan's importance to the United States and to the free world led us to seek to promote Japan's re-emergence as a major trading nation. All our hopes for cooperation from Japan's free-world partners have not yet been realized but there were encouraging developments in 1955.

The improvement in Japan's foreign trade and exchange position was dramatic. Exports continued their upward trend and are likely to reach an annual level of nearly $1.9 billion, compared to $1.6 billion in 1954 and $1.3 billion in 1953. No similar rapid increase in imports developed. Industrial production in the first three quarters of 1955 was 6 per cent above the same period a year ago. The rice harvest is expected to be one of the largest in Japan's history.

Nonetheless, Japan still faces grave problems. The increase in foreign exchange occurred because the trade deficit was exceeded by foreign exchange receipts from other sources, notably from U.S. military procurement and troop expenditure. Other weak spots are evident. Small business is squeezed by high cost of imported raw materials, and by shortages of capital and high interest rates. Because of rising international prices of freight and raw materials, Japanese businessmen have recently again considered the possibility of increasing coal and possibly also iron ore imports from Communist China.

On balance, Japan's economy in 1955 registered a continued though moderate expansion. The inflationary pressures which had threatened internal economic stability and the foreign trade position in 1953-54 have been successfully contained by deflationary measures of the government without depressing economic growth.

The $64 question in Japan is whether the current rate of expansion is sufficient over the longer run to absorb the rapidly expanding labor force. In the shorter run, Japan will remain very sensitive to the fluctuations of international business conditions.

Korea:

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Korea:

Let us look briefly at Korea. The division of this country at the 38th parallel left the South with an overcrowded peninsula, a chaotic fiscal situation and a substantial but ill-balanced and run-down plant which Koreans could not effectively operate. Progress had been attained by the Spring of 1950 when the Communists struck and Korea became a battlefield. With the help of the U.S. and the U.N., Korea has reached a stage at which both industrial and agricultural production exceed the 1949 level. However, with the handicap of the burden of supporting a large military force, it is doubtful that Korea can soon attain the goal of self-support.

The Republic of China:

Since 1949, the Government of the Republic of China on Taiwan -- sometimes called Formosa -- has had to cope with two abnormal economic burdens: (1) the influx of some two million refugees from the mainland -- roughly an immediate population jump of one-quarter; and 2) the necessity to maintain a disproportionately large armed force in face of the Communist threat.

In spite of these abnormal burdens, the Government of the Republic of China can point to heartening production increases in industry and agriculture. A factor contributing to increased agricultural production has been the successful implementation of the land reform program.

Taiwan has made good use of U.S. economic aid. Prices have become increasingly stable. Taiwan's standard of living is considered to be the highest in the Far East, except for Japan.

Communist China:

As for Communist China, its government has embarked on an ambitious program calling for the development of heavy industries and socialization in which the consumer receives no priority.

The economy of Communist China continued to expand during the past year, but at only about one-half of the 10 per cent rate of increase achieved from 1950 through 1954. In looking at these figures, it is well to remember that they reflect increases over a very low base. Industrial output is to rise only 5 per cent under the 1955 plan, compared to the reported

rise

rise of 17 per cent during 1954. Agricultural output appears to have recovered from the sharp setback it received in 1954 when the rice crop was below the previous year's level and cotton production was considerably reduced by the wide-spread floods. Prices remain stable largely because of the Government-controlled distribution system.

The government in 1955 continued to invest largely in heavy industry and transport and communications and budgeted an increase in military expenditures of 20 per cent over that of 1954.

Despite the Communist efforts, the increase in food production per capita on Taiwan has been far greater than on the mainland.

South East Asia:

The kaleidoscope contains some highly important bits and pieces often grouped together as the countries of South East Asia. These countries may be generally classified as underdeveloped countries. They have very limited industrial developments, and low per capita income, and are largely dependent upon the demand for and price of their three basic commodities - rice, tin and rubber.

With the exception of Burma, the economic picture in these countries has improved considerably during the past year. In Thailand, Malaya, Indonesia and the Philippines, the budgetary situation, the balance of payments and foreign exchange reserves have all been strengthened. The surplus commodity problem, which appeared extremely serious at the beginning of the year, was, for the most part, overcome when Thailand and, to a lesser extent, Burma largely disposed of their surplus rice. The world market for rubber and tin continues strong and the rapidly increasing price for rubber, which has developed, has served to bolster the economies of those countries that produce it.

Viet-Nam, Laos and Cambodia still suffer from the dislocations resulting from seven years of strife and much of the rice lands are still out of production. In these countries, it now appears desirable to shift our aid programs from measures designed to meet emergency war-time situations to longer-range programs which will help restore the productivity of its land and encourage the industry of its people.

Summary.

Summary:

A summary view of recent economic developments in South and South East Asia must clearly make allowances for the exceptionally favorable conditions due to good crop yields. The governments are determined to speed economic growth but they have many problems before them. The absence of an indigenous entrepreneurial class, and the association of foreign private capital with colonialism, along with the oppressive poverty which makes domestic savings and investment very difficult, are tremendous obstacles to economic growth in the underdeveloped countries of the world.

India:

A particularly interesting fragment in the kaleidoscope is India. Large in terms of population, area and production, India has been experiencing a substantial and a rising rate of economic growth. Attributable in part to exceptional weather bringing good crops, these increases were accompanied by drops in prices despite increased government expenditures and a record pace of investment expenditure making up for the slow progress of earlier years. But it has yet to be determined whether in the absence of fortuitous factors a rate of investment can be sustained at levels required for steady growth in per capita income. This is a key element of the appraisal of the prospects for the success of the Indian 5 year plan. Another is the climate for investment which India is prepared to create.

The Near and Middle East:

The vast area comprising the Near East, South Asia and Africa is large geographically. It does not loom so large in the economic kaleidoscope today. However, this area is in a state of economic and political transition. As a whole, it is usually regarded as an under-developed area. The population is unevenly distributed and there has been relatively little systematic development of the natural resources with which many countries in the area are richly endowed. Moreover, by and large, this area of the world stands in vivid contrast with the nations in which education, industrial training, economic philosophy and political outlook are all consistent with high-level and expanding production and rising living standards. Except for Greece and Turkey, there is little evidence that the rate of growth in the Near and Middle East is on a level which can achieve steady increases in per capita income. In Greece and especially Turkey the process of development has brought with it internal inflation and external

balance

balance of payments problems. But these may well be economic growing pains.

Agricultural production in the Near East in 1955 seems to be larger than in the previous year with particularly good crops in Greece and Turkey. The Turkish crop failure of 1954, as a result of a serious drought, was one of the major factors contributing to the rapid inflation and the substantial foreign trade deficit of that year and the even greater one in the first half of 1955, which resulted in a 26 per cent drop in foreign exchange reserves from mid-54 to mid-55.

Industrial production has continued to expand at a fairly rapid rate in the more developed countries of the area, including Greece, Lebanon, and Israel. Industrial production in Greece was more than 10 per cent above 1954 in the first half of 1955. Production in Turkey continued its steady rise even though hampered by shortages of imported raw materials.

There has been a steady upward trend in petroleum production in the Near East which continued into the first half of 1955 reaching a new high point.

Well over half of the exports of the Near Eastern countries consists of petroleum. In 1954 the four major petroleum exporters of the area -- Iraq, Iran, Saudi Arabia, and Kuwait - increased their exports and with them, despite an increase in imports, their already substantial foreign trade surplus.

The other countries of the area continued to run a large foreign trade deficit even though imports were restricted below their peak 1951 level and total exports were slowly rising, approaching the 1951 peak. Egypt's position shifted from a modest surplus in the first half of 1954 to a moderate foreign trade deficit in the first half of 1955, largely as the result of a sharp drop in exports. This reflected lower cotton prices and difficulties in marketing the crop. Barter agreements with Soviet Bloc countries were made in an attempt to alleviate the serious foreign trade problem of the country.

The European-Soviet Bloc:

Another piece in the global economic kaleidoscope is the European-Soviet Bloc.

Eastern Europe and the USSR showed continued increases in total production in 1954 and 1955 although this growth in the satellites was not as smooth as in the USSR. In the latter

countries

countries the rate of industrial growth slackened in 1954 and agricultural production was subnormal. 1955 brought considerable recovery in both regards.

Agricultural and industrial output in the Bloc both rose in 1955. As regards agriculture, the increase was attributable to the combined impact of good weather, expanded acreage and greater use of fertilizer and machinery. Industrial production in the European-Soviet Bloc in the first six months of 1955 was generally 10 per cent higher than in the first half of 1954.

Some attempt was made to ease domestic economic problems by an expansion in imports from the non-Communist world financed through an increase in exports and partly through gold shipments. Both the expansion of trade and the shipment of gold started during the latter half of 1953 and has continued to date. A substantial part of the increase in imports in 1954 from the non-Communist world consisted of foods. There was no significant change in imports of capital goods or of industrial raw materials. But with the total imports of the European-Soviet Bloc from the non-Communist world amounting to only $1.5 billion per year, the impact of even large changes in this on the total economy of the Bloc must necessarily be quite limited.

The outlook for continued rapid economic expansion in the Bloc is good since a high rate of investment continues to be maintained.

Latin America:

Now let us look at some of the Western hemisphere pieces in our economic kaleidoscope: First of all -- Latin America. The economic outlook for Latin America over any short-run period simply is the outlook for a relatively small number of export products. Most of these countries are still dependent in large measure on their export trade. A number still possess primarily one commodity economies.

Chile, for example, depends principally on copper for the foreign exchange with which she buys her imports. At the moment copper prices are relatively high and prospects are good, at least for the near future. In spite of the favorable prices now obtaining, however, Chile has a balance of payments problem, and has had to maintain controls on imports as a result of internal inflation which has plagued the country for a number of years.

Bolivia has a similar problem. Tin prices are far below war-time peaks. Production has declined in recent years, and the Government is experiencing great difficulty in providing adequate foreign exchange for even essential imports. Bolivia is one of the few countries in Latin America which has received grant aid from the United States in the form of surplus agricultural commodities, although a number of others have arranged to purchase cotton and foodstuffs for local currencies, under the provisions of Title I of Public Law 480.

Venezuela derives 70 per cent of its foreign exchange from exports of petroleum and related products; the petroleum industry has had a rapid expansion throughout the past decade, and the Venezuelan market is and should continue to be, one of the best in Latin America for both agricultural and industrial exports from the U.S.

Sugar is the principal export of Cuba, Haiti and the Dominican Republic, and is also important in the trade of Peru, Mexico and Nicaragua. Sugar has been in surplus supply for several years. During the past year prices have been relatively stable at, or slightly below, the lower limit provided under the International Sugar Agreement. Consideration is now being given to renewal of the agreement, and it is hoped that, when renegotiated, it will cover an increased share of the world trade in sugar and provide a greater measure of price stability.

Latin America's most important export, both from the standpoint of total value and as to number of countries affected, is coffee. It is exported by 14 countries, and is the most important export of five of these countries. In 1954 coffee accounted for 61 per cent of the total value of Brazil's exports, for 84 per cent of Colombia's, for 88 per cent of El Salvador's, 78 per cent of Guatemala's and 79 per cent of Haiti's. Considering the 20 American Republics as a whole, coffee exports represented 36 per cent of the total value of their exports in 1954.

Coffee prices are currently at approximately the 1953 level, and if they remain near this level the producing countries will have little cause for concern. However, coffee future prices are currently well below the spot market level, reflecting an anticipated decline in price as production increases over the next few years, with large new plantings coming into bearing, and the producing countries are greatly concerned that this may mark the beginning of a long-term downward price trend. They recall the ruinously low prices which prevailed throughout the 1930's and 1940's, and are

endeavoring

endeavoring to agree upon measures for joint action to stabilize prices. The outlook for American exports in this area depends to a considerable degree on whether or not these measures are successful.

Something might perhaps be said about the political outlook in certain areas where trade has been affected by political developments. With the new regime in Argentina there is reason to expect an increase in agricultural production, which was formerly the backbone of the Argentine economy. The new Minister of Commerce has announced that, to remunerate producers and promote expansion of areas under cultivation, prices of 1955-56 agricultural crops will be raised across the board. The new Minister of Trade has stated that Argentina's future trade policy would be aimed at freeing overseas trade, returning the trade to private enterprise, and encouraging an expansion of exports. These policies, if carried out successfully, will bolster Argentina's internal economy, encourage new capital investment and lead to a sound expansion that will benefit both Argentina and the countries which trade with her.

Guatemala is recovering rapidly from the revolution against the Communist regime which disrupted her economy last year. This recovery should be furthered by the decision of the U.S. to help complete the Inter-American Highway within 3 years if possible. When completed, this through route from the Mexican border to Panama should lead to a considerable expansion of tourist traffic and, later, to the development of an increasing trade with the Central American countries which it traverses.

Haiti, which suffered serious hurricane damage last year, has also made a rapid recovery.

Brazil, by its very size, is a factor of importance in any appraisal of the outlook for Latin America. Coffee is its principal export, and there, as I have said, the long-run outlook is somewhat doubtful. However, Brazil's coffee exports during the past two months have been very high, in relation to those of earlier months of this year. The newly elected government will come to power in January with a somewhat less pressing fiscal problem than might have been predicted a few months ago, and the outlook for containing inflation, and possibly relaxing import controls is brighter than in some time.

Other Countries:

Time does not permit even a brief mention of all countries in the world. I am especially conscious of having omitted most of the British Commonwealth countries. Of these, Australia, New Zealand, Canada, and the Union of South Africa, are rapidly developing countries of the British Commonwealth facing the problem of maintaining growth without inflation.

The United States:

Before we finish with the bits and pieces of the world economic situation a word about the U.S. is in order. The phenomenal economic growth of our country is staggering to foreign observers as it often seems to many of us at home. The extent to which all levels have shared this prosperity is perhaps less widely realized abroad than here. However, many of our friends abroad who follow developments here are keenly conscious of the grave problem of the discrepancy in the economic position of agricultural and non-agricultural sectors of our economy. And they are understandably interested in the course of action we plan to take to resolve this dilemma.

In foreign eyes, the U.S. is often awefully viewed as the economic giant which, through its unprecedented vast market and economic strength affords opportunities for economic growth, but which by the same token can plunge the world into economic disaster. Two heartening developments to them were the fact that U.S. economic growth has indeed been spectacular and that the slackening of activity here which ended a year ago was short lived and did not herald a down-turn of the economic activity of the free world.

Recapitulations:

We have looked at the pieces in our kaleidoscope. Let us now look at two patterns formed by those pieces; first, for the immediate future; and second, the long-range outlook.

a) Immediate Outlook:

In examining the immediate outlook it should be noted that in 1955 the more highly industrialized countries of the free world continued to maintain their rate of unprecedented economic expansion, and Western Europe increased its gross production over 5 per cent. Western Europe is on the verge of pressing to the limit its plant capacity and available manpower. Inflationary

pressures

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pressures are evident in some countries. Orthodox measures are being adopted to combat inflation in response to these signs of economic and financial strain. With the major exception of the U.K., the international economic position of this part of the free world both in terms of current transactions and size of financial reserves, is quite good.

In contrast only a few of the less industralized, or so-called under-developed, countries of the free world have been able to expand their production at half the rate of Western Europe. Economic progress in most of the under-developed countries has barely kept pace with population growth. The immediate prospects of these countries is bound up with a world-wide fall in all agricultural prices, with the major exception of rubber, and with the appearance of surpluses of most major crops. The most troublesome surpluses are those of wheat, rice and cotton.

Although some of the under-developed countries may have experienced fairly good overall rates of growth during the post-war period as a whole, per capita wise output has been constant since 1951 and investment particularly has fallen below the 1951 and 1952 levels. Furthermore, the post-war growth was in part the result of the especially good crops of 1952-53 and 1953-54. These factors may have resulted in a higher rate of economic expansion than can be sustained in the face of such a development as a fall in cereal production. Even in the case of India, with its ambitious program for expansion, there is concern that a sufficient volume of capital formation is not being attained to sustain a steady increase in per capita income.

This somewhat sombre picture does not presage an immediate and rapid economic growth throughout the free world. Nor does it suggest that the problems associated with agricultural surpluses are soon to evaporate.

b) Long-Range Outlook:

Now let's discuss the long-range outlook which incidentally has a brighter aspect. On a long-term basis the record of economic growth is distinctly favorable in the U.S., Canada, Western Europe and

Latin

Latin America. Western European capacity to save is proving sufficient, not alone for its own investment needs, but is also furnishing a source of capital for under-developed countries.

In the under-developed countries profits make possible comparatively favorable rates of return on direct investments. Whether these rates will in fact be favorable enough to attract adequate capital for sustained economic growth depends on a variety of factors, including political developments in these countries.

It is note-worthy that although on an over-all basis in South Eastern Asia and Latin America economic growth has barely kept pace with the growth of population, this is not true of all countries and per capita economic progress has been significant in several. There is also evidence that South East Asia may be moving off dead center after a period of stagnation.

Perhaps the most reassuring indication is the fact that thus far the dislocations and economic down-turns have shown no tendency to snowball. Evidence of a latent basic economic strength in the free world, hitherto not fully appreciated, appeared during this period. For example:

- Western Europe maintained its rate of investment when U.S. aid slackened off.

- Western Europe is also turning out to be a good market for Latin America.

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- The U.S. economy has proved stable and has demonstrated a striking capacity to adjust itself without capsizing, as some foreign observers feared it might. Some years ago, apprehensions were epitomized in the phrase: "When the U.S. sneezes, Europe gets pneumonia". These forebodings saw no realization in 1954. In fact, sustained European purchases in the U.S. during this period actually helped our recovery from what turned out to be only a mild cold.

Thus the prospects for continued economic growth in the free world give us good grounds for encouragement -- but not for complacency.

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Production Economics Research Branch

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FARM COSTS 1/

by
Kenneth L. Bachman, Head, Production, Income and Costs Section

Address, 33rd Annual Agricultural Outlook Conference
Washington, D. C., November 28, 1955

This year I shall focus my remarks around three related subjects. As we do in the Farm Cost Situation, we shall begin with a look at the recent and prospective changes in farm costs. Then we shall look at the implications of the longer run trends in the cost situation to farmers' plans for use of production resources. Finally, we shall review briefly some aspects of the farm financial situation.

This year has seen a continuation of the situation in which (1) cost rates on the average have changed little, and (2) a number of factory-produced items and real estate taxes have moved up, while the prices of many farm-produced items have declined.

Compared with the immediate postwar 1947-49 period, real estate tax rates have increased by half. Prices of machinery have gone up about a third. Wage rates for hired labor have risen by about a fifth.

On the other side, feed prices are now 15 percent below the 1947-49 level. Costs of feeder and replacement livestock have gone down nearly 20 percent.

The prospective situation for 1956 appears to be more of the same. Recent and prospective increases in prices of tractors, farm machinery, and some building and fencing materials will probably mean that these cost rates will average higher next year than this.

The behavior of fertilizer prices in recent years has differed somewhat from that of many other industrial items. The cost of fertilizer per pound of nutrient has declined since 1952. Prices for next year are expected to remain at about present levels although some further slight decline is possible.

Tax rates on real estate and personal property are expected to be up about 5 percent.

Feed, seed, and livestock cost rates fluctuate with changes in prices of farm products. Seed prices are now considerably lower than last spring and unless seedings for conservation are materially expanded, prices for seed may average somewhat lower next year than this. Prices of feed can also be expected to average somewhat lower than in the 1954-55 period, although they will probably not differ greatly from current levels. Prices paid for feeder and replacement livestock may be about the same in 1956 as in 1955.

Farm wage rates increased slightly this year despite the drop in farm income. An important factor here has been the strong nonfarm employment conditions. With a continuation of relatively full employment in the nonfarm sector, wage rates for hired farm labor can be expected to move up a little again next year.

1/ Most of the charts used in this talk can be found in the Farm Cost Situation and the Outlook Chartbook.

This adds up to the prospect of lower average prices of feed and possibly seed next year, offsetting, in large part at least, somewhat higher prices for many of the industrially produced items farmers use in production.

Farmers' total expenditures are expected to remain near present levels next year. With farmers' income positions somewhat less favorable than in recent years, they can be expected to be cautious in purchases.

On the other side, the requirements of commercial agriculture are now high and price relations remain favorable for some continued substitution of such things as fertilizer for land and machinery for labor. The big change among cost rates occurred during and immediately following World War II. Relative to the composite index of all cost rates, prices of many important industrially produced items have declined significantly during the war and postwar periods. Fertilizer and gasoline, for example, are only about three-fourths as expensive relative to all cost rates as they were in the 1935-39 period.

The most important question to farmers is what they should do about the present cost situation. Basic to this is the evaluation of longer term price and production prospects in agriculture. I shall leave the development of these to Dr. Wells and Dr. Johnson later in the program. But we have recently gone through a period of great change in farm resource use, cost rates, and technology. These changes are still underway.

This leads me to four general comments which I shall emphasize by way of a general interpretation of the implications of trends in the cost situation to farmers' plans for the use of production resources.

(1) Fundamental changes in the productivity and use of farm labor have occurred. In the past 15 years output per man-hour has nearly doubled. Man-hours of labor used have been reduced nearly 30 percent.

This is related to important changes in the economic and technical environment of farmers. Farm wage rates are now 4 times the prewar level. Similar or larger increases have been going on in our economy generally. The price a farmer puts on his own labor is more difficult to evaluate. It should be noted, however, that the operator's opportunity costs in farming have gone up and the operator's realized net income per farm is still more than 3 times as high as in 1935-39.

At the same time, developments in technology have favored the substitution of capital for labor. By increasing the size of their farms and thus increasing their use of machinery, farmers have made reductions in both family and hired labor. Large numbers of farm people have shifted to nonfarm employment while the "technical revolution in farming methods" continues. The shift to nonfarm occupations has occurred during a period of high agricultural prosperity. In view of present farm cost-price and income relations, such adjustments seem likely to continue if nonfarm employment remains high. They are also likely to continue to be desirable from the standpoint of cost reduction on many individual farms. Incidentally, adjustments of this type are less likely to add to total output than many other types of cost reduction.

(2) The use of industrial goods in farm production increased sharply during and following World War II. The increased use resulted from both the relative changes in cost rates and the improvements in technology that have occurred. Total expenditures have increased much faster than cost rates. Increased use of some

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industrial items such as fertilizer and pesticides has continued steadily and has been profitable for many individual farmers in view of changes in price relations and technology.

In part, the increased purchases of machinery and equipment represent the other side of the pattern of decreasing the use of labor and increasing the size of the farm. But considerable room exists on many farms for continuing these changes through better use of investments in machinery and equipment.

During the last 2 years the size of farm and the number of tractors and other machines on farms increased, but the estimated depreciation has run near the aggregate capital expenditures. For example, some farmers have rented or bought additional land to get more effective use of their machinery and equipment. Other farmers have bought or used older tractors or machinery where prospective requirements are likely to be limited. Although continued expansion in the use of industrially produced items is needed in the economic interest of many farmers, changes in farm price-cost relations have increased somewhat the financial risks involved.

With the upward trend in the use of production items from nonfarm sources the structure of total farm operating costs is becoming less flexible. Year-to-year variations in prices paid for goods and services from nonfarm sources are relatively small. Cost rates of farm-produced inputs and to some extent of hired labor, are more variable. They tend to fluctuate more with the prices or incomes received by farmers.

(3) The use of goods produced by other farmers has increased steadily. The quantity of goods and services that farmers buy from each other also has increased as enterprise specialization continues. From 1939 to 1949 the number of farmers selling chickens, for example, was reduced by about a third, but the volume of chicken and broiler production has doubled. Such shifts toward more specialization have resulted in increased efficiency on many farms. For example, the related expansion in the size of enterprises often has permitted more effective use of machine methods and other advantages associated with larger enterprises.

(4) Although these changes have occurred in agriculture generally, both the rate and incentive have varied greatly among types of farms. Some areas, like the Northern Plains spring wheat area, went through their rapid phase of mechanization in the late twenties and thirties. Others, like the northeastern dairy area and the Corn Belt hog-dairy area, have increased mechanization more rapidly in recent years. In others, the mechanization has been gradual through a period of time.

Changes in cost rates have varied significantly among types of farms. Increases in farm cost rates from 1947-49 to 1954 ranged from 5 percent on irrigated cotton farms in the High Plains to 22 percent on cash-grain farms in the Corn Belt. These changes reflect the differences in composition of costs and the differing trends in farm cost rates at national and regional levels.

Costs per unit of production have varied even more widely. Increases in cost per unit of production range from 1 to 40 percent. Dissimilar changes in cost rates, crop yields, and production efficiency all affect costs per unit of production. These differences among types of farms illustrate the varied nature of the problem of adjustment to the cost situation.

Only brief attention can be given to the implication of all these changes in agriculture to the financial situation of farmers. A detailed statement on the financial outlook for farmers is available for distribution.

Of basic importance in the present financial situation of farmers has been the increase in the amount of capital required. In terms of 1947-49 dollars, the value of assets per farm worker now totals more than $12,000 as compared with $8,000 in 1940. In terms of current dollars they have increased from less than $4,000 to over $14,000. This increase in capital requirements carries with it important financial problems, particularly for young people with limited resources.

The Balance Sheet of Agriculture reflects a further increase in the total value of farm assets and ownership equities during 1955. Short-term and real estate debt both increased in 1955 but their increases were more than offset by the rise in farm land values.

The increase in debt reflects the continuation of the trend toward increased capital requirements in agriculture. To increase efficiency or enlarge operations during 1955, some farmers bought more land; some installed irrigation systems; many added to their machinery, equipment, and livestock, and used more fertilizer and insecticides. These expenditures, made at a time when farm receipts were lower, reduced the financial reserves or increased the debts of many farmers.

In the aggregate, reductions in liquid financial reserves of farmers in 1955 were small but farm debts were increased considerably. Many farmers, particularly those whose liquid reserves consisted only of working funds, increased their debts to avoid depletion of these funds. But most of the expansion in farm debt occurred in connection with expenditures for capital and operating purposes.

The upturn in farm real estate values that began in the last half of 1954 continued through November 1, 1955. Nationally, values have increased nearly 6 percent since March. As of November 1, they were at a new record peak.

Despite recent increases in land values, their current relationship to farm commodity prices is about the same as in 1940. Land values lagged behind the rise in commodity prices during and following the war, but the spread has narrowed appreciably in the last few years.

The recent rise in land values during a period in which farm commodity prices and incomes declined was apparently due to: (1) A strong demand by farmers for additional land to make more efficient use of machinery; (2) more liberal lending policies adopted by several major lenders in 1954 and continuing into 1955; (3) a generally favorable crop year; and (4) a strong and expanding nonfarm economy which encourages the belief on the part of many investors that land is a sound long-term investment.

In conclusion I would like to emphasize three general points.

(1) Costs are holding up. Industrial items seem likely to go a little higher and farm-produced items a little lower in 1956. The impacts of this will vary considerably by type of farm and the composition of costs.

(2) Trends toward commercialization of production seem likely to continue in view of the structural changes in technology and cost relations. These changes appear to be part of the general progress in our economy.

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(3) In the present income situation farm financial and farm management problems are becoming increasingly difficult and important. Many of these problems involve individual decisions. Others may involve possible modification in institutional services or farm policies.

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FARM FAMILY LIVING

Talk by Margaret L. Brew, Head, Household Management Section, Household Economics Research Branch, Agricultural Research Service, U. S. Department of Agriculture at the 33rd Annual Outlook Conference, Washington 25, D. C., Monday, November 28, 1955

Farm family income has decreased each year since 1951, although the drop has not been as sharp as the drop in aggregate income of farm operators from farming. This is because the number of people dependent on farming has decreased and because income from other sources has increased.

Since the mid-thirties there has been a general downward trend in the farm population, with some year-to-year variation. The general decline since 1950 has been at the rate of about half a million persons per year. Currently the farm population is estimated at about 22 million persons.

Farm families now have more income from sources other than farm operation than 5 or 10 years ago. The Agricultural Marketing Service estimates show an upward trend since 1947 in per capita nonfarm income of persons living on farms, and we have additional evidence from other sources. The 1954 Census of Agriculture shows that more operators were working off their farms than in 1949. The tabulation of this last Census is not complete, but for the 24 States reported when this chart 1/ was prepared, the proportion of farm operators working 100 or more days off the farm had risen from 20 percent in 1949 to 24 percent in 1954. The Bureau of the Census also has reported an increase in the percent of farm people employed in industrial occupations. In 1955, 36 percent of all employed persons living on farms were working in nonagricultural industries, as against 30 percent in 1950. The Census has also reported an increase in the percent of farm wives in the labor force. In April 1954, 22 percent of the rural farm wives were in the labor force, while in March 1950, there were only 17 percent. Note that the increase was greater for farm than for urban wives.

The Agricultural Marketing Service has estimated the average income per capita of farm persons from all sources--nonfarm as well as farm--to be $913 in 1954 as against $977 in 1951 and an average of $857 for the three years 1949-51. This represents a drop of about 7 percent between 1951 and 1954 and a 7 percent increase between the average for 1949-51 and 1954. But, even though prices of consumer goods have remained relatively stable during the past few years, if we go back as

1/ The charts referred to are included in Section 3, Family Living, of the "Agricultural Outlook Charts, 1956."

far as 1949, there has been an increase in the prices farmers pay for commodities used in family living. As a result, total per capita income, expressed in dollars of constant purchasing power, was about 2 percent less in 1954 than the average for 1949-51. This would amount to about $50-$100 per family at present-day price levels, assuming a family size of four. Some further decline in 1955 is indicated. Nevertheless, we conclude that, although farm families on the whole have less total purchasing power than in the period 1949-51, they probably have not had to cut back their living by as much as might be inferred from the totals on farm income alone. Undoubtedly, there has been considerable variation both among families within any given region and between various types of farming areas depending upon the amount of off-farm income and the type of farming operations.

There is considerable evidence to support this premise of less cutting back in farm family living expenditures than in farm income. For example, farm families have continued to add to their stock of household goods and conveniences. In 1954 approximately 70 percent of all farmers owned an automobile as against 63 percent in 1950. Over 90 percent of the farms were attached to electric power lines in 1954 as against 78 percent in 1950. The percent of farm dwelling units with piped running water in 1954 can be estimated to be in the neighborhood of 55-60 percent whereas it was only 45 percent in 1950. About half of the farm families had a telephone in 1954 as against 38 percent in 1950. About one-third had home freezers as against 12 percent in 1950. These figures I am quoting are estimates based on 39 States so far reported from the 1954 Census of Agriculture. This chart shows the percent of farms having home freezers in 5 of the States reported earlier this fall. The Bureau of the Census has recently reported that in June of this year 42 percent of the rural farm households reported ownership of a TV set as against only 3 percent in 1950.

The farm-operator family level-of-living index of the Agricultural Marketing Service, which combines in one figure four indicators of level of living--the percentage of farms with electricity, the percentage of farms with a telephone, the percentage of farms with automobiles, and average value of products sold or traded in dollars of constant purchasing power--shows a marked increase between 1950 and 1954. Greatest gains were made in the South.

The continued rise in the level of living of farm families, measured by their accumulation of household goods and conveniences, seems to be matched by continued spending for family living--both to buy these durable goods and for other items for family living. On this point we have less information and must rely on data from farm families in three midwest States that submit home accounts to their experiment stations. These farm families, on the whole, are at a higher economic level than are all farm families from the same farming areas. Their housing facilities are better and over the years they have accumulated more household equipment. Undoubtedly their financial resources are greater also. Thus it can be expected

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that their expenditures will show less year-to-year variation than do those of the total farm population. However, there is no reason to believe that the direction of change in spending would not be the same for the two groups. These data indicate that farm families have maintained their spending in terms of dollars of constant purchasing power during the past few years. The reports of the account-keeping families suggest that the squeeze between declining income and slightly increased prices for consumer goods has been met by decreased savings for the year. Accordingly, farm families are becoming more like city families in the value they put on consumption vs. savings.

Changes in farm family spending for different kinds of goods and services, insofar as we can measure them, have followed much the same trends as for all consumers in the United States. For example, the account-keeping farm family per capita expenditures for food have continued to rise at about the same rate as have per capita expenditures by all consumers in the United States. It may be that farm families, like urban families, are continuing to increase their expenditures for foods that will require less preparation in the home and are also buying higher priced foods. Furthermore, farm families, like urban families are eating more meals in restaurants. Also, the families reporting on the account projects for the States show a decline in the use of home-produced food. But, overall, farm food production still makes a large contribution to the living of farm families. On the average, home-produced foods, when valued at retail prices, provided 43 percent of the total money value of household food in a 1952 food consumption survey of rural farms in the North Central region. Even if there has been some decrease since 1952, the proportion must still be large.

The account-keeping farm families spent more for clothing in 1954 than in 1953, although for the country as a whole per capita clothing expenditures were slightly lower in 1954. However, the trend since World War II in per capita clothing expenditures, adjusted to take account of price changes, has been downward for the account-keeping farm families, as for the total population. In part, this downward trend has resulted from changes in the age distribution of the population. The high birth rate in early post-war years, plus the increasing survival of persons to the older age brackets, has resulted in an increasing proportion of low clothing spenders among the population, both rural and urban. However, this population shift probably explains only part of the decline in per capita expenditures for clothing. The new automobile and the TV set may be competing with new coats and shoes.

The great surge in the purchase of furniture and equipment in the early post World War II years to make up for purchases foregone during the war years and the anticipatory buying in late 1950 accounts for the somewhat lower expenditures by the account-keeping farm families and by all consumers in the United States during the years of 1952 and 1953. Less than usual replacements were needed. The account-keeping farm families sharply increased their expenditures for furniture and equipment in 1954.

In dollars of constant purchasing power, the per capita medical care expenditures of the account-keeping families were stable during the years 1952-54, and about 8 percent above those of 1949-51. This is a larger increase than for all consumers in the United States.

However, though farm families have been increasing their spending and there have been notable increases in some of the home conveniences and facilities, there is still need for improvement in levels of consumption. At least one-third of the farms in the United States lack piped running water in the dwelling unit, and at least half in the South. Because, in many areas, the installation of piped running water is so dependent upon the installation of electricity, a continued rapid increase in this facility in the coming years would be possible. The increase from 45 percent in 1950 to within the range of 55-60 percent is already a remarkable achievement.

In spite of the large quantities of food purchased and home produced, the diets of many farm families are still below the recommended allowances for some of the essential nutrients. The North Central Regional Study of food consumption showed that almost one-fourth of the farm families in 1952 had diets with less than recommended amounts of calcium and ascorbic acid, nutrients provided chiefly by milk and certain fruits and vegetables. A study of farm families in selected farming areas in the South in 1948 showed them to be even worse off. The cotton and tobacco areas were particularly low. These are areas known to have relatively little home production of milk. Our studies have shown that farm families that do not produce milk tend to use far less than families that do. However, poor diets may result from lack of knowledge of the proper foods to eat as well as from insufficient resources to acquire the necessary foods. Thus improvement in the economic level of farm families needs to be accompanied by a continuing program of nutrition education.

Historically, rural people have been at a disadvantage in obtaining medical care. At the beginning of this decade proportionately far fewer physicians, dentists, and nurses were serving the rural population than the urban. In counties not part of a metropolitan area or adjacent to a metropolitan area the number of physicians and dentists per 1,000 population was less than two-thirds that of the United States as a whole. The post-war program of federal aid for hospital construction was expected to bring additional personnel to rural areas as well as provide needed hospital facilities. There is no measure of how well it has succeeded but it can be assumed that the physician-population ratio in rural areas is still substantially below the urban.

Farm family enrollment in voluntary health insurance programs has been slow. And yet health insurance permits a better level of medical care than would be possible without insurance by reducing the financial impact of illness. In 1953, the only year for which we have statistics showing health insurance owners by degree of rurality, only 45 percent of rural-farm families had some type of health insurance for one or more family members as contrasted with 70 percent of urban families. A study in the same year in one county in North

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Carolina showed only 40 percent of the farm operators enrolled in such programs, whereas two-thirds of the rural nonfarm self-employed and clerical workers had such insurance. The indications all are, however, that this level represents a considerable improvement for rural families over earlier years, and that the proportion of rural families carrying some type of health insurance has continued to increase.

In 1954 farm children were attending school in larger proportions than ever before. However, enrollment rates for farm boys and girls in the high school age group (14-17 years) were still about 6 percent below those for all children in this age group in the United States. Differences in enrollment rates for those over 18 and for children of kindergarten age were even more marked. Furthermore, for many of the farm pupils attending school the educational resources are not as great as for the urban pupils. In 1954-55, the States with a higher percent of rural residents tended to have lower expenditures per pupil than the States with a lower percent of rural residents. Even when differences in income among the States are taken into account, expenditures per pupil tend to be somewhat lower for those States with a higher proportion of rural residents.

With the revision of the Social Security Act in 1954, an important step was taken in providing for the welfare of the farm family. During the past two decades, if the farm-operator died in the early stages of the family life cycle, his widow and dependent children were in a disadvantaged financial position relative to the city worker covered by OASI. Equities in the farm enterprise are relatively small at this stage of the family life cycle and these were likely to be the only financial resource available for the rearing of the children and the maintenance of the wife until the children were old enough to permit her to take a full-time paid position. Beginning with the second quarter of 1956, when most farm operators will have been covered by OASI for the minimum period, farm families will have some protection provided against the risk of death of the breadwinner. The farm operator will also benefit from the retirement provisions of the OASI at age 65 as does the city worker. If, in the course of his working life, he has acquired considerable equity in the farm enterprise, he will have additional resources for his own maintenance or to pass on to his heirs.

Now, what of the future? Though prices of consumer goods have been very stable so far in 1955, they are expected to rise slightly during the coming year. Already we can see evidence of an upward swing in apparel prices and there is reason to believe that prices of consumer durables may show more strength in the months to come. Charges for consumer services have risen steadily and will probably continue to do so. However, food prices are expected to show little change, on the whole. And, because food is the largest component of the family budget, it will tend to keep overall increases in family living costs small.

In October the Index of Prices Paid by Farmers for all commodities used in family living was the same as a year ago. The chart shows indexes for four of the six separate commodities prices for this index. Figures in this chart carry through June 1955, the last available when this chart was prepared. The September figure for house furnishings was virtually the same as a year ago, the index for food and tobacco was down 3 percent, that for building materials used in housing was up about 3 percent. September prices of new automobiles and auto supplies, though lower than in June of this year, were 2 percent higher than for September 1954. Clothing and household operation, not shown here, were both slightly higher than a year ago.

The Consumer Price Index for urban wage-earners and clerical workers is another widely used measure of changes in consumer prices. The commodities and services priced for this index are those determined to be typical of the urban worker's family living budget. However, in many instances, urban and rural families purchase the same types of goods and services. The chart shows four of the separate components of the index. Rent and medical care, which typify the price movement of service items in the family budget, continued their upward trend in 1955. The September figures for these components were 1-2 percent higher than a year ago. In September, the apparel figure in this index, like the clothing figure in the Index of Prices Paid by Farmers, was a little higher than a year ago. Footwear, an important item in the budget of families with many children, had increased 1 percent. Footwear and women's and girls' apparel in this index had an unusually high upturn this fall. Trends in prices, as shown by these indexes of consumer prices may foretell what is ahead in the year to come.

With the possibility of some slight rise in consumer prices in the coming year and a further decline in farm income, farm families cannot maintain the level of living of the past few years unless they can reduce savings further or add to income from nonfarm sources. If cuts in living expenditure are made, which categories of consumption are most likely to be curtailed? One of the most sensitive items in the farm family budget is gifts and contributions. Another highly sensitive item is transportation. With the many new cars purchased since 1951, replacements of the automobile itself could be deferred. Expenditures for furnishings and equipment are also likely to be reduced when income prospects are less than formerly. But, because farm families have so recently added to their stocks of equipment and furnishings, this curtailment will probably not affect the level of living immediately. Refrigerators and washing machines installed in the late forties can be made to serve a few more years. One improvement which I fear will suffer is the installation of piped running water. This is an expensive installation to make, and farm families that do not clearly foresee continued high income may hesitate to make the expenditures necessary for this convenience. I would hope that where farms have recently been electrified, families would place a high priority on this expenditure.

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Another curtailment which is likely to occur with reduced income is in spending for education. This, too, would be a most unfortunate step for the farm families to take. There probably will be no decrease in medical care expenditures. Families may feel impelled to cut back on the amount of medical care they buy but this will be balanced by rising costs of medical services. Those families that have seen the advantages of voluntary health insurance may be loathe to give up this program.

Farm families could increase their home production of food as a hedge against lower cash incomes. The many freezers installed in recent years provide the farm homemaker with a means of making farm-furnished foods available beyond their seasonal production.

Summary

Farm families, on the whole, have maintained their levels of living at least through 1954 in spite of the drop in total farm income. This is, in part, because the number of families dependent on farm income is smaller and because farm families have increased their income from nonfarm employment. The reserves of durable goods that farm families have built up over the past 5 years have also helped to maintain their levels of living. Farm family spending, insofar as it can be measured with the available data, seems to have held up through 1954 and to be following the same trends as spending by all consumers in the country. For example, food expenditures are up, reflecting shifts towards prepared foods and choices of higher priced foods. Moreover, farm families seem to be like other consumers in the tendency, since World War II, to spend more for durable goods and less for clothing than their previous pattern.

In the year ahead increased prices for some consumer goods seem likely, but the overall increase in living costs will be slight because food prices, which are not expected to increase, are so large a part of the total. But increases in living costs, however small, in combination with decreasing income from farming may result in a further cut in farm family purchasing power. This will mean reduced expenditures for living, unless farm families can continue to add to nonfarm income or make adjustments in saving. In view of the fact that so many farm homes lack running water, it is hoped that a cut in expenditures for this improvement is not in prospect.

Table 1.--Spending trends of U. S. consumers, 1940-54, in current dollars and in 1947-49 dollars

Year	Amount spent per person (current dollars)						Amount spent per person (1947-49 dollars 1/)					
	Family living, except housing, auto 2/	Food	Clothing	Furniture and equipment	Household operation	Medical care	Family living, except housing, auto 2/	Food	Clothing	Furniture and equipment	Household operation	Medical care
1940	395	143	63	32	47	23	660	298	118	60	70	31
1941	450	165	74	40	50	24	715	316	133	70	73	34
1942	517	198	89	39	56	28	742	323	138	60	77	37
1943	592	231	111	37	61	31	800	338	164	56	80	39
1944	650	255	123	39	67	35	864	378	169	54	85	43
1945	718	282	138	45	73	38	934	410	181	59	90	45
1946	823	322	149	69	74	43	987	408	178	83	87	49
1947	892	352	150	83	84	47	935	367	154	85	87	49
1948	931	367	154	86	90	50	906	352	149	83	87	49
1949	907	358	143	78	88	51	891	358	144	78	88	49
1950	942	368	140	87	94	54	916	364	143	86	93	51
1951	1,007	411	148	86	100	56	908	365	139	78	91	51
1952	1,037	427	151	84	102	60	913	372	142	77	91	51
1953	1,056	432	147	84	107	62	923	383	140	78	92	51
1954	1,059	435	144	83	108	65	923	386	138	78	92	52

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Source: Derived from data of the U. S. Department of Commerce, adjusted slightly to make comparable with farm family accounts.

1/ Adjusted to 1947-49 dollars by the Consumer Price Index. The separate components of the Index were used for food, clothing, and other categories.

2/ Includes spending for other consumption categories not shown separately.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Foreign Agricultural Service

OUTLOOK FOR EXPORTS

Statement by Gwynn Garnett, Administrator, Foreign Agricultural Service, at 33rd Annual Agricultural Outlook Conference, Thomas Jefferson Auditorium, USDA, November 28, 1955 - 3:00 p.m.

By this time, enough has been said about the general economic situation that this report on the agricultural export outlook probably will contain few surprises.

It is the Department's opinion that United States agricultural exports in fiscal year 1955-56 will be maintained at about the improved level reached in 1954-55.

In other words, we expect that the export gains made during the past two years will be held, but do not see much probability of immediate further improvement.

To review briefly where this puts us, you recall that in 1951-52 the value of our agricultural exports reached an all-time high of $4.1 billion. That was the time of the war in Korea, with heavy foreign stock-piling. The next year, due to worldwide agricultural recovery and decreased demand, our exports dropped abruptly -- down to $2.8 billion. Since then, largely as a result of U.S. Government export programs and increasing foreign buying power, our agricultural exports have been climbing back -- 4 percent gain in 1953-54, and another 7 percent gain in 1954-55, for a total of $3.1 billion.

On a volume basis the gain has been even more substantial. On that basis, we have regained about half of the exports lost in the 1952-53 drop.

Let us consider the outlook on a commodity basis.

Wheat: Foreign supplies of wheat have increased, which means greater competition. Nevertheless, if we make full use of existing export programs,

we should be able to export about 275 million bushels of wheat and flour this season -- in other words, about the same as in 1954-55. Government programs last year helped move about half of our wheat exports. Competitive pricing, and very hard pushing through these programs, will be needed to maintain wheat exports. It is obvious, therefore, that unless domestic use is expanded, there will be little reduction in the carryover.

Rice: During the three years preceding 1954-55, rice exports averaged about 16.6 million bags, milled basis. Last year our rice exports dropped to 10 million bags, milled basis. This year we expect some improvement. U.S. prices are more competitive and foreign exportable supplies are smaller. If we are to avoid continuing acreage reductions on the part of U.S. rice producers, it is necessary that we expand our markets.

Coarse Grains: Prospects for exports of coarse grains are relatively good and increases are expected. Last year we exported about 5 million short tons of coarse grains; this year it should be possible to reach about 8 million tons. Foreign livestock numbers are expanding. Europe's wheat crop is better quality this year and less of it will be fed. This should cause Europe to import more of such coarse grains as corn, grain sorghums, barley, and oats. Large U.S. supplies are available at competitive prices, while Argentina, on the other hand, has had a poor corn crop. U.S. coarse grains will move largely through dollar, rather than foreign currency sales.

Cotton: Cotton is faced with greater export problems than any other commodity. Its export prospects, both for the present and for the future, are not good. We estimate that exports of cotton during the current marketing year, despite large commitments under Government export programs, will not exceed 2⅓ million bales. This would be a drop of one million bales from

last year. The reasons are: (1) Foreign cotton production continues to rise; (2) foreign cotton consistently undersells us; (3) world production of competitive man-made fibers is big and is becoming bigger; (4) dollar cotton sometimes is discriminated against in world trade. Our cotton carryover at the end of the current marketing year probably will be the largest in history. The national cotton acreage allotment proclaimed in October, if approved by producers, would result in the lowest harvested acreage of this crop since 1879. If trends in world cotton production and price continue, U.S. cotton will be further squeezed out of the world market.

Tobacco: The tobacco export outlook is substantially improved. We look for 1955-56 tobacco exports to exceed 500 million pounds, or about 15 percent above last year and largest since the early postwar period. Favorable factors include: (1) Much larger movement for foreign currency under Public Law 480; (2) relatively low stocks in some purchasing countries; (3) improved gold and dollar reserves abroad, along with higher level economic activity; (4) greater consumption of cigarettes containing U.S. tobacco; (5) a record U.S. 1955 flue-cured crop. On the negative side, however, we also have the two factors of increasing foreign production and discrimination against imports of U.S. tobacco.

Fats and Oils: Exports of fats and oils should continue at a high level. Last year the United States exported about 4.2 billion pounds of fats, oils, and oil equivalent of oilseeds. This was 700 million pounds above the previous high of the preceding year, and was reflected in a sharp cut in stocks of cottonseed oil and linseed oil. Record exports were made of edible vegetable oils, soybeans tallow, greases, and butter. Lard exports were above the previous year. These levels of exports can be expected to continue. The soybean outlook also is

favorable. Exports this year probably will reach 65 million bushels, exceeding the record level of 60 million bushels last year. Soybean prices are about 20 percent lower than last year, making them competitive with Manchurian beans. Lard exports are expected to exceed 650 million pounds.

Animal Products: The United States has a potentially expanding market not only in lard and tallow but also in variety meats (offals) and in dairy and poultry products. Except for better cuts of meat, and quality eggs and poultry, U.S. prices for these products generally are competitive. In all countries, however, producers of animal products are sensitive to foreign competition, and foreign government protection can be expected to be an important limiting factor in our export volume.

Fruits: Total fruit exports this season are likely to exceed those of last season, largely as a result of favorable demand in Western Europe. Apples will benefit from reduced European production, while pear exports may be no larger than last year. Winter orange exports are likely to be below last year because of large Mediterranean production, but prospects for summer orange exports are favorable. Lemon exports, high last season, are likely to remain so, with little change in grapefruit. All processed citrus products are expected to continue their upward trend. Canned deciduous fruit exports are likely to be somewhat above last year due to increased sales under local currency programs. Total dried fruit exports, principally raisins and prunes, are not expected to exceed last season because of somewhat higher prices in the U.S., especially for prunes.

As we see, there is no general pattern for our exports. The prospect for exports of tobacco, soybeans, and animal fats is good; the prospect for cotton exports not so good; and the others fall somewhere in between.

As the Extension people in this audience know better than anyone else, these export prospects have real meaning for farm people when translated into acres of crops and numbers of livestock.

During the better export years following World War II, American farmers had as many as 50 million acres devoted to production for export. Because of declining foreign markets, they now have something like 30 million acres producing for export. When you work with farm people in helping them figure out how to get along on fewer producing acres, you actually are helping them determine how to face up to a world market that is accepting less of their commodities.

The impact of world developments on American agriculture takes on real meaning when we consider the proportion of some of our commodities that in recent years have found a foreign market. Last year the following proportions of our agricultural production went overseas: Wheat, 28 percent; cotton and rice, each 26 percent; grain sorghums, 24 percent; tobacco, 23 percent; soybeans, 19 percent; lard, 20 percent; and inedible tallow and grease, 44 percent.

Another way to look at these export proportions is in terms of actual disappearance -- in other words, eliminate the quantities of farm products that go into storage and consider only those that go into actual use. On the basis of actual use, we find that exports accounted for even greater proportions: Wheat, 32 percent; cotton, 28 percent; tobacco, 30 percent; rice, 48 percent; and grain sorghums, 31 percent.

Percentages like these tell us that anything happening abroad that limits the export of U.S. farm products hits American farmers hard and at the same time has direct bearing on plans and programs of all of us who are in the business of helping American farmers.

I returned recently from a trip in which I visited 14 countries of Europe, Africa, and Asia, and conferred with our agricultural attaches who cover 25 countries in those areas. I found very clearly that agriculture, from the Mediterranean to the Pacific, is astir and in ferment. Important developments are taking place in agricultural production and consumption, in both the developed and underdeveloped nations. These developments are beginning to change trade patterns, and will have increasingly important effect in the years immediately ahead.

The most significant changes are in underdeveloped countries. The economies of these countries are most agricultural. Great efforts are being made toward economic development, with particular emphasis on agriculture. Increased production of wheat, rice, cotton, and tobacco is emphasized. These countries plan either to consume their increased production at home or export it to industrial countries to earn foreign exchange to further accelerate general economic development.

During the next three to five years, we can expect world production of farm products to increase faster than population and demand. International markets for wheat, cotton, and rice are likely to become more troubled than at present as a result of the widespread emphasis over the world in increasing production without regard to demand. These developments will exert pressure to restrict exports of U.S. farm products.

In Europe, which is our best customer, governmental programs and policies can be expected to continue high-level production of food grains. It will be very difficult to obtain expansion in cotton markets. There should be some expansion in markets for feedgrains, vegetable oils, animal by-products, tobacco, and fruit — but the U.S. share will depend on our trading policies, prices, and merchandising efforts.

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In the Middle East, today's existing political ferment focuses public attention on agricultural development. It can be expected that over the next few years, the Middle East will export increased amounts of cotton and possibly other products.

India's agriculture continues to improve. Over the next 10 years, there is good reason to expect agricultural production to increase at a rate greater than population growth. Unless general economic development increases consumer purchasing power sufficiently to absorb the additional agricultural products, India is likely to become a competitive exporter of some farm products.

Let us consider Japan. In 1954 Japan was our best customer for farm products, taking a total of $417 million worth. Because of an imbalance of trade with the dollar area, however, Japan has a clearly stated policy of shifting its imports of farm products to those countries that buy heavily from her. Also, Japan's neighbors have their eyes on her. At an elaborate Communist Trade Fair that opened October 18 in Tokyo, the major emphasis was placed on the ability of Manchuria to supply high quality soybeans to Japan.

In the world market today, we face both problems and opportunities. As a basis for meeting such challenges, the Department has greatly strengthened its overseas representation. We have increased the number of American agricultural attache posts from 40 to 58. We have increased the number of agricultural attaches from 55 to 84. Our foreign marketing specialists are covering 66 countries as they look into marketing opportunities and problems of competition. We are trying to implement our trade agreements programs to improve the access to foreign markets. We are constantly analyzing world marketing situations to provide guides both to our own work and to U.S. agricultural trade. We are promoting U.S. agricultural participation in international trade fairs. We are participating in the Government's special export programs, including Public Law

480, Section 402 of Public Law 665, and the barter program. We are taking these and other actions to help strengthen the American farm economy.

But we need to go even further. The magnitude of the job requires that more people work together. American agriculture must keep in step with the changing times, and this makes extremely important the work that Extension people are doing.

American farmers need to be aware of the universal desire to upgrade diets -- a desire which creates additional demand for U.S. feeds, edible fats and oils, and animal products. If we are to maintain a level of agricultural exports that will effectively utilize our agricultural resources, we will need to export a greater variety of agricultural products. We have long talked about the need for diversification of our agriculture; not it's time to talk about diversification of our exports.

We must export more specialty products in which we sell not only the product but also our superior technology that goes into it. There is opportunity for selling semi-processed products that the world needs but is not well acquainted with -- new dairy products, new poultry products, new meat products. Products such as these represent new marketing opportunities. With the world's agriculture changing, we need to be alert to develop such opportunities. And we must work together in their development -- people from the state colleges, we in the Department of Agriculture, and our friends in industry and trade.

I am firmly convinced that American agriculture has opportunity to retain and strengthen its place in the world market. In so doing, however, we must look ahead and take advantage of our new opportunities.

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UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Agricultural Marketing Service
Agricultural Economics Division
Washington 25, D. C.

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Demand for Eggs and Poultry 1/

A great deal is said about the demand for eggs and poultry, but actually little is known about the demand for these products. In fact, much misunderstanding arises over the semantics of demand. How is demand defined? What is a changed demand?

To help extension workers reply to questions about the demand for eggs and poultry, a brief definitional framework of demand is presented, followed by a discussion of the several indicators of demand available for these commodities. Indicators that relate to demand can be obtained by examining: (1) movements over time in the variables that affect the demand for poultry and eggs and quantifying the relationships by statistical analysis (time series analysis); (2) results of consumer expenditure surveys (cross-section analysis); and (3) studies of consumer preferences and household practices.

Definitional framework - Consumers are generally willing to take more of a commodity at lower prices than at higher prices. Based on this fact, economists have formalized (1) the concept of a demand curve and (2) the measurement known as the "elasticity of demand"--the percentage change in consumption that accompanies a given percentage change in price. The demand curve, which may be a straight line, shows quantities that consumers are willing to buy at various prices. The slope, or relative steepness of the curve, indicates the degree of elasticity of demand with respect to price. Demand is considered to be relatively elastic if the consumer adjusts the quantity demanded more than proportionally to changes in price so that total value increases as supply increases. If the consumer responds so that total value decreases with an increase in supply, demand is said to be relatively inelastic. Finally, if the consumer makes proportional adjustments so that total value remains unchanged regardless of the level of supply, we say that demand is of unit elasticity.

Time series analysis - Results of statistical analyses made so far using time series data to measure the elasticity of demand for poultry products are not completely satisfactory. However, the demand for eggs appears to be relatively inelastic; that for all chickens appears to be slightly elastic; and the elasticity of demand for turkeys probably is close to unity.

Elasticities of demand, based on time series data, from several different studies for eggs, chickens, and turkeys are presented in table 1. Where price was used as the dependent variable, an algebraic transformation was made to derive the elasticity coefficients.

1/ Prepared by Martin J. Gerra for the 33rd Annual Agricultural Outlook Conference, November 28-December 1, 1955, Washington, D. C.

Agriculture-Washington

Table 1.- Eggs and poultry: Selected factors affecting demand, United States

Commodity and author of study 1/	Period included in analysis	Dependent variable	Method of solution 2/	Coefficient of multiple determination	Effect on per capita consumption of 1-percent change in-- 3/			
					Price		Disposable income	
					Net effect	Standard error	Net effect	Standard error
					Pct.	Pct.	Pct.	Pct.
EGGS:								
Fox (1)	1922-41	Retail price	Least squares	0.87	4/-0.43	5/	0.57	5/
	1922-41	Farm price	do.	.82	4/- .34	5/	.49	5/
Judge (2)	1921-41	Consumption per capita	do.	.91	- .53	.09	.31	.08
	1921-41	---	Limited information	---	- .58	6/	.44	6/
	1921-50	Consumption per capita	Least squares	.86	- .32	.13	.43	.12
	1921-50	---	Limited information	---	- .60	6/	.27	6/
Nordin, Judge, and Wahby (3)	1921-41	Consumption per capita	Least squares	6/	- .55	7/	.41	7/
CHICKENS:								
Fox (1)	1922-41	Retail price	do.	.86	8/-1.33	5/	1.01	5/
	1922-41	Farm price	do.	.86	8/-1.61	5/	1.71	5/
POULTRY:								
Nordin, Judge, and Wahby (3)	1921-41	Consumption per capita	do.	6/	- .46	9/	.74	9/
	1921-41	---	Reduced form	---	- .68	6/	.53	6/
TURKEYS:								
Fox (1)	1922-41	Farm price	Least squares	.90	- .83	5/	.88	5/

1/ Underlined numbers in parentheses refer to literature cited at end of table. 2/ The study by Fox was in terms of first differences of logarithms; the others were in terms of logarithms. 3/ Derived by algebraic transformation when price is used as the dependent variable. 4/ Coefficients in this analysis were adjusted to allow for estimated average errors in measuring year-to-year changes in production of eggs. 5/ Not available because elasticity coefficients are derived by an algebraic transformation, and data required to obtain the applicable standard error are not contained in the original source. 6/ Not given in original study. 7/ Stated as statistically significant at the 5-percent level. 8/ Effect on per capita production. 9/ Stated as not statistically significant at the 5-percent level.

(1) Fox, Karl A. The Analysis of Demand for Farm Products, U.S. Dept. Agr. Tech. Bul. 1081, 1953.
(2) Judge, George C. Econometric Analysis of the Demand and Supply Relationships for Eggs. Conn. Agr. Expt. Sta. Bul. 307, 1954.
(3) Nordin, J. A., Judge, G. G., and Wahby, Omar. Application of Econometric Procedures to the Demands for Agricultural Products. Iowa Agr. Expt. Sta. Research Bul. 410, 1954.

The elasticity coefficient plus or minus its standard error indicates a range which for two samples out of three includes the true universe value, provided certain statistical conditions are met by the initial data. Because the studies are of necessity based on sample data, random fluctuations arise due to sampling variability. Results, therefore, must be interpreted within error ranges. For example, in the 1921-41 least squares study of eggs by Judge, the change in per capita egg consumption associated with a 10 percent inverse change in the retail price is, on the average, 5.3 percent. However, associated with the 5.3 is a standard error equivalent to 0.9. When allowance is made for this, the analyst can state that the change in consumption associated with a 10 percent change in price will, on the average, fall in the range 4.4 to 6.2 percent. The probability of this being a true statement is two-thirds. Statements that are correct 95 percent of the time can be made by using twice the standard error in computing the range.

The whole demand curve can shift up and down, or to the left or right. This is referred to as a "shift" in demand or a change in its level. The level of demand for eggs is influenced by the size of the population, consumer income, supplies and prices of competing commodities, and consumer tastes and preferences. Population can be allowed for by expressing the variables in terms of units per capita. Disposable income per capita can be introduced in each equation as a demand shifter. The percentage change in consumption that normally accompanies a given percentage change in income is referred to as the elasticity of demand with respect to income. If disposable income per person increases 10 percent, per capita egg consumption, on the average, rises about half as much, with any given level of prices. For chickens and turkeys, an increase in income of 10 percent results in about an equal percentage increase in consumption. All of these relationships should, of course, be stated in a range that allows for the applicable standard errors. The apparent effects of substitute commodities are not shown in table 1, although statistically significant competitive relationships were obtained by Fox (1) between chickens and other meat items and (2) between turkeys and chickens. Certainly we know from experience that the relative price of chicken and other meats influences the housewife when doing the family shopping. And if the price of turkeys is too high relative to prices of chicken (or other meats as well), she might be tempted to sacrifice holiday tradition.

The important observation to be drawn from these analyses is that, with an inelastic demand for eggs, larger supplies can be moved into consumption channels only by a reduction in price that more than offsets the increased quantity taken by consumers. For chickens, increased supplies probably do not depress price to the extent that total value (price x quantity) falls. Rather, value increases somewhat because demand is elastic. Value remains approximately unchanged when demand is constant, i.e., the situation for turkeys.

Cross-section analysis - The use of data from consumer expenditure surveys to examine aspects of demand, generally called cross-section analysis, is similar to cutting into a moving panorama of the factors influencing demand and studying them at one instant of time. Income, population, price, taste preferences, and other demand factors are considered to be fixed in cross-section analysis. It is not necessary, therefore, to explain their movements as it is for time series analysis. In addition, information on other factors affecting food consumption, such as size of family, occupation, race, nationality, and regional location often are obtained.

The upper section of table 2 shows consumption and money value of eggs, poultry meat, meat other than poultry, cheese, and fish for a single week in 1948, by income groups, for urban housekeeping families of 2 or more people. The data are from the 1948 survey of food consumption of urban families conducted by the Department of Agriculture. Meat other than poultry, cheese, and fish are included because they compete more closely with eggs and poultry meat in consumers' food budgets than do other food items. The lower section of table 2 shows the data on a per person basis to adjust for differences in family size associated with level of income. Because households with higher incomes tend to include a greater number of people per household than do lower income households, relationships between money value, consumption, and income should properly be examined on a per person basis. For example, families in the $7,500 and over category used 65 percent more eggs per family than families in the under $1,000 category, but less than 10 percent more on a per person basis.

If regression lines are fitted to the observations for quantity and money value per person, so that each of these is expressed as a function of family income, the results listed in table 3 are obtained. Based on consumption per person, eggs, poultry meat, meat other than poultry, and fish used showed little increase with a given rise in income, while cheese consumption increased about 0.2 percent with a 1-percent increase in income. However, when the data for money value are examined for relationships with income, eggs and poultry meat still showed very little increase with increased income, but meats other than poultry, cheese, and fish showed increases of about 0.2 percent with a 1-percent increase in income.

Greater variation between income groups, than for eggs and poultry meat, in the average price per pound paid for meats other than poultry and for fish appears to account for money value-income relationships significantly higher than quantity-income relationships for these items. As income rises, consumers probably tend to buy higher grade meat and the more choice cuts of meat. Much of the fish in the lower income brackets may have been obtained without a money expenditure, while purchases by the highest income bracket probably include a much greater proportion of more expensive fish and shellfish. For cheese, however, average price per pound, by income class, falls slightly as income rises, except for the $7,500 and over class. Therefore, the elasticity of money value with relation to income for cheese is about the same as the consumption-income relationship. It is hard to

Table 2.- Selected foods consumed at home: Average consumption and money value, per household and per person, in a week, by income groups, April-June 1948 1/

Income class	Average income 2/	Consumption					Money value				
		Eggs	Meat		Cheese	Fish	Eggs	Meat		Cheese	Fish
			Poultry	Other				Poultry	Other		
Dollars	Dollars	Dozens	Pounds	Pounds	Pounds	Pounds	Dollars	Dollars	Dollars	Dollars	Dollars
					(a) Per household						
Under 1,000	610	1.43	1.65	5.66	0.58	0.73	0.78	0.96	3.19	0.33	0.35
1,000 - 1,999	1,555	1.67	1.37	6.78	.73	.99	.96	.78	4.30	.40	.45
2,000 - 2,999	2,505	1.90	1.40	7.91	.88	1.04	1.08	.83	5.20	.48	.54
3,000 - 3,999	3,485	2.08	1.52	9.17	1.03	1.16	1.20	.89	6.09	.56	.58
4,000 - 4,999	4,421	2.20	1.88	9.02	1.15	1.22	1.24	1.14	6.22	.60	.69
5,000 - 7,499	5,861	1.94	1.75	8.89	1.26	1.12	1.11	1.08	6.29	.63	.68
7,500 and over	11,766	2.36	2.67	10.52	1.36	1.24	1.46	1.64	8.00	.77	1.00
					(b) Per person						
Under 1,000	243	.57	.66	2.25	.23	.29	.31	.38	1.27	.13	.14
1,000 - 1,999	536	.58	.47	2.34	.25	.34	.33	.27	1.48	.14	.16
2,000 - 2,999	764	.58	.43	2.41	.27	.32	.33	.25	1.59	.15	.16
3,000 - 3,999	990	.59	.43	2.61	.29	.33	.34	.25	1.73	.16	.16
4,000 - 4,999	1,267	.63	.54	2.58	.33	.35	.36	.33	1.78	.17	.20
5,000 - 7,499	1,724	.57	.51	2.61	.37	.33	.33	.32	1.85	.19	.20
7,500 and over	3,080	.62	.70	2.75	.36	.32	.38	.43	2.09	.20	.26

1/ Food purchased, produced at home, or received as a gift or in payment for services rendered, by urban housekeeping families of 2 or more persons in the United States.

2/ 1947 income after Federal income tax.

Clark, Faith, Murray, Janet, Weiss, Gertrude S. and Grossman, Evelyn, Food Consumption of Urban Families in the United States. U. S. Dept. Agr. Agr. Inf. Bul. 132. 1954.

Table 3.- Selected foods consumed at home: Percentage change in consumption and money value per person associated with a 1-percent change in income and related statistical coefficients 1/

Item	Based on consumption			Based on money value		
	Coefficient of determination	Net effect	Standard error	Coefficient of determination	Net effect	Standard error
		Percent	Percent		Percent	Percent
Eggs	0.35	0.03	0.02	0.72	0.07	0.02
Meat:						
Poultry	.01	.03	.11	.06	.06	.11
Other	.92	.08	.01	.99	.20	.01
Cheese	.90	.21	.03	.95	.19	.02
Fish	.24	.04	.03	.86	.24	.04

1/ Computed by a least squares analysis from data in the lower section of table 2 converted to logarithms.

Table 4.- Eggs consumed at home: Average consumption per person and expenditures per household in a week, by income group and child status, April-June 1948 1/

Income class	Consumption per person in household with-		Expenditures per household with-	
	Children	No children	Children	No children
	Dozen	Dozen	Dollars	Dollars
Under 2,000	0.38	0.52	0.90	0.74
2,000 - 2,999	.46	.56	1.10	.77
3,000 - 3,999	.51	.60	1.25	.94
4,000 - 4,999	.51	.68	1.23	.94
5,000 - 7,499	.55	.58	1.28	.89
7,500 and over	.58	.66	1.68	1.09

1/ Urban housekeeping families of 2 or more persons in the United States.

Clark, Faith, Murray, Janet, Weiss, Gertrude S., and Grossman, Evelyn. Food Consumption of Urban Families in the United States. U. S. Dept. Agr. Agr. Inf., Bul. 132. 1954.

explain the decrease in the average price of cheese throughout the income ranges, unless lower income groups purchase cheese which is relatively inexpensive as a single purchase but which on a pound-equivalent basis is expensive, while taste preferences and dietary habits in the higher income groups may include a relatively inexpensive cheese such as cottage cheese.

An additional factor to be considered as influencing the demand for eggs and poultry is whether a family has children. Consumption per person and expenditures per household for eggs, by income class, show more of an increase, as income rises, for families with children than for families with no children (table 4). Therefore, the elasticities of demand with respect to income and of expenditures per household with respect to income probably are greater for families with children than for families with no children.

The 1948 urban food consumption survey also provides information on the proportion of families, by income groups, using eggs and poultry in a week. Table 5 compares the 1948 data with comparable data for 1942. Practically all families used eggs during the week covered by the report in both 1942 and 1948, whereas less than half of the families reported using poultry meat. 1/ The increase from 1942 in the number of families using poultry, especially for low income groups, was large. However, the average quantity consumed by households using poultry meat was about the same in the two periods. The decline in consumption of poultry meat by the upper third income group may reflect higher incomes in 1948 and, therefore, a greater use of meat other than poultry. To make a strictly valid comparison, however, allowance would need to be made for relative prices in the two periods.

Consumer preference studies and household practices - Perhaps tastes and preferences have as important an influence on the demand for eggs and poultry as prices and income. However, because changes in tastes and preferences generally occur more slowly than fluctuations in prices and income, their effects on demand are difficult to measure. Studies of consumer preferences and household practices, nevertheless, aid in understanding the market that exists for poultry and eggs, and such studies may suggest ways for influencing demand.

The factors which housewives consider of primary importance when purchasing eggs appear to be quality, grade, and freshness, although, as table 6 shows, price and size also are important. The relatively minor importance of price indicated by the data in table 6 may reflect situations in which the quantity purchased is largely influenced by price and income, but, once a purchase has been decided upon, quality and other associated factors become more important.

1/ As per capita consumption figures show that, on the average, almost one-half pound of poultry meat is consumed every other week, the implication should not be made that half of the families in the United States do not eat poultry meat at any time.

Table 5.- Eggs and Poultry: Percentage of households using and average consumption per household using, by income terciles, in a week, spring 1942 and 1948 1/

Item and income tercile	Percentage of households using			Consumption per household using		
	1942	1948	1948 as percentage of 1942	1942	1948	1948 as percentage of 1942
	Percent	Percent	Percent	Dozen	Dozen	Percent
Eggs:						
Income:						
Lower third	94	97	103	124	179	144
Middle third	100	98	98	149	203	152
Upper third	99	100	101	158	209	132
All	98	98	100	144	198	138
				Pound	Pound	
Poultry:						
Income:						
Lower third	20	37	185	3.70	3.78	102
Middle third	25	35	140	4.04	4.17	103
Upper third	38	43	113	4.76	4.40	92
All	28	38	136	4.25	4.16	98

1/ Includes quantities purchased, produced at home, or received as a gift or in payment for services rendered.

United States Agricultural Research Service. Eggs and Poultry in City Diets, Commodity Summary No. 4 1949, p. 9.

Table 6.- Eggs: Percentage of housewives considering specified factors of primary importance when purchasing, selected cities

City	Year study was conducted	Factor considered					
		Quality, grade, and freshness	Price	Size	Brand name, color, or cleanliness	Nothing specific, or relied on retailers reputation	Miscellaneous and unclassified
		Percent	Percent	Percent	Percent	Percent	Percent
Baltimore	1938	22.0	23.4	---	1/5.8	47.7	1.1
Wichita	1949	83.1	16.9	---	---	---	---
Peoria	1950	53.7	13.1	21.6	2/4.5	3.6	3.5
Des Moines	1949	18.5	4.6	42.8	3/10.8	13.0	10.3
Columbus	1950	66.4	23.0	9.0	---	1.3	.3
Ithaca	1952	71.0	11.0	12.0	2/2.0	---	4.0

1/ Brand name.
2/ Color.
3/ Color, 3.8 percent; cleanliness, 7.0 percent.

Jasper, William A. Some Highlights from Consumer Egg Studies, U. S. Dept. Agr., Agr. Inf. Bul. 110. 1953. p. 8.

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Because the evaluation of quality by housewives is a subjective concept, it is important to know how housewives make this evaluation in order to supply them with the product demanded. A summary of studies on consumer preferences indicates some general notions in consumers' minds on what constitutes quality. Principally, external appearance, source of supply, and appearance, taste, and odor after breaking out, as well as shaking the egg and other vague notions, were reported by housewives as quality considerations. Results of several surveys show that consumers generally select AA or A grade eggs as the type they prefer, and that they can give a good reason for this preference.

The importance of quality considerations by consumers, however subjective, has led to emphasis on the production of high-quality eggs. However, as the production of high-quality eggs increases the cost of production, the question arises whether consumers will pay sufficiently more for the extra quality eggs to cover the added cost of production. Consumer preference studies indicate that consumers are willing to pay a premium for what they consider high-quality eggs. Further research is needed to indicate whether this premium will continue to cover the added cost if a substantially larger proportion of eggs marketed are of high quality.

Consumer preference studies can be used in a similar way to evaluate the aspects of demand for poultry relating to tastes and preferences.

Information on household practices also offers additional insights into demand. Results from one such survey covering 2 cities are listed in table 7. Almost all households used eggs for table use in the two cities, indicating that the elasticity of demand for table use probably is inelastic, particularly as recent per capita consumption figures show that, on the average, we are eating more than an egg a day in shell form. A large increase, perhaps, could be made in the use of eggs in batters and doughs and in other food preparations. As the quantity of a product used by a consumer increases, its demand tends to become inelastic. If production in such cases continues to increase, severe price and income decreases to producers can be avoided only by finding additional uses for that output.

Table 7.- Eggs: Percentage of households using and percentage used, by use and income class, Birmingham and Indianapolis, spring 1953

Use	Percentage of households using							
	Birmingham				Indianapolis			
	All households	Household income			All households	Household income		
		Low	Middle	High		Low	Middle	High
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
For table	97	96	95	99	98	99	97	98
In batters and doughs	65	61	69	63	45	58	49	31
For other food preparation	47	32	53	56	43	32	48	48
Any	98	97	99	99	99	100	100	98
	Percentage used							
For table	81	81	79	82	87	87	87	87
In batters and doughs	12	14	13	10	6	8	6	5
For other food preparation	7	5	8	8	7	5	7	8
Total	100	100	100	100	100	100	100	100

United States Agricultural Marketing Service. The Poultry and Egg Situation. July 1954, p. 21.

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Monday 11 A.M.
November 28, 1955

CURRENT PROBLEMS OF ECONOMIC POLICY

Remarks of Dr. Grover W. Ensley, Staff Director
Joint Committee on the Economic Report, U. S. Congress */
Before the
Thirty-Third Annual Agricultural Outlook Conference
Washington, D. C.
November 28, 1955

Economic growth is the current theme of association meetings, of most financial statements, of nearly all economic reports, and certainly of every political platform! Fortunately, most of today's economic problems emerge from, or are spotlighted by, buoyant prosperity at home and abroad and the optimistic economic outlook for the years immediately ahead. This is welcome contrast to the distressing problems posed by recession or worsening international conditions.

Although a $400 billion national economy is clearly in sight, few expect the economy to expand real output 7 per cent during the next year as it has during the past year. Today unemployment and unused industrial capacity are near an irreducible minimum as compared with a year ago. Likewise, the participation rate of the population in the labor force is relatively high. The challenge for the coming year, therefore, is for economic activity to adjust to a sustainable rate of long-term growth, roughly one-half that of the past year, a rate consistent with rising productivity and the normal growth in the labor force. In the first instance, private and

*/ The views expressed are those of the speaker and do not necessarily represent the views of the Joint Economic Committee or individual members of that Committee.

public programs must provide the restraint needed to prevent the current prosperity from developing into inflationary boom with the possibility of a subsequent bust. The Federal government must pursue consistent fiscal and monetary policies. In the second place, the Federal government, in cooperation with others, must develop programs which will permit and encourage improvement in the segments of the economy which have failed to keep pace with the general advance.

I have selected for discussion today four major problem areas which are closely related to the stability and growth objectives of the Employment Act of 1946. They are, first, Federal fiscal problems; second, monetary and credit problems; third, problems of agriculture; and fourth, problems of low-income families and chronically depressed areas.

Federal Fiscal Problems

A balanced Federal budget for the current fiscal year ending June 30, 1956 now seems probable. The Review of the 1956 Budget, issued last August by the Executive Office of the President, estimated Federal expenditures at $63.8 billion, receipts at $62.1 billion, and the administrative deficit at $1.7 billion. Expenditures may be higher than this estimate both because of the difficulty of holding defense outlays to the goal of $34 billion, and because prices of goods and services the Government buys are rising.

On the other hand, the August estimate of receipts, although $2.1 billion higher than estimated by the President last January, is still low. It looks now as though Federal revenue this fiscal year could be sufficiently higher than estimated by the Treasury last August to wipe out the then estimated administrative budget deficit, and to result in a moderate cash surplus.

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Prospects for budget surpluses in the fiscal years immediately ahead are also good, even though it seems unlikely that total Federal expenditures can be reduced from current levels. Present spending for defense is close to the maintenance level, but non-defense spending will rise moderately on the basis of present programs.

At present tax rates, Federal receipts will rise if the economy continues to expand. Longer-run projections at high levels of production and employment suggest that the rise in Federal tax receipts should be appreciably greater than expenditure changes on the basis of present programs. Favorable economic conditions should result, therefore, in a budget surplus in fiscal 1957 and the years immediately ahead.

This prospect poses important questions of fiscal policy. Should a prospective budget surplus be regarded as the occasion for deliberate changes in Federal tax or expenditure programs? What priority should be given to reducing taxes as compared with reducing the national debt, or with expanding Federal financial support for education, health, highways, and similar programs?

Economists pretty much agree today on Federal budgetary goals. Only a few still insist on trying to balance the budget every year. Most are guided by general economic conditions and the position of the combined budgets of business, consumers, and all governments. Put another way, the objective now is to balance the Nation's economic budget at high levels of employment and production and at stable prices.

If fiscal policy for the coming year is to be based on the need for price stability and sustainable high levels of employment and production, commitments to reduce Federal receipts should be deferred until the economic outlook

for the coming year is clearer, even though we may now reasonably forecast balance or even surplus in the Federal budget because of the momentum of the current prosperity. The emergence of a surplus in the coming year should not lead necessarily to the conclusion that it automatically justifies tax reduction.

Application of the surplus to reducing the $279 billion Federal debt might hold a higher priority from the standpoint of maintaining economic stability. In the face of a booming economy a tax cut next year would be inflationary. Of course, the economic outlook may change as the months pass. In this event, the Congress should move quickly to provide revenue adjustments appropriate to the needs of the economy.

We would do well to study the recent experience of Great Britain. Last April, just before a general election, the British government prematurely cut income taxes across the board, and took many persons off the tax rolls. The ensuing inflation has now resulted in significant increases in sales taxes to absorb excess purchasing power.

At the same time, we should recognize that applying a budget surplus to immediate tax reduction may further postpone Federal expenditures designed to meet the needs of our rapidly growing population and our expanding economy. In their preoccupation and concern over maintaining aggregate national demand for full employment and for defense, economists have given too little attention in recent years to government programs needed to enable the economy to increase its long-term rate of growth. Expenditures for education, health, highways, and the like have been low in recent years relative to the growth of the Nation's population, production, and income.

The lack of a real school program to match our economic, military security, and cultural needs, for example, has been characterized a national disgrace. We need to expand educational opportunities for everyone; and more particularly for children in rural and other areas where opportunities now are below the national average. The recent Joint Economic Committee hearings on automation were convincing that we need more scientists, mathematicians, and skilled people to conceive, operate, maintain and improve our modern technology. We need more and better education in the humanities and the social sciences to make us better citizens in a free world, and to prepare us to make more satisfactory use of the increased leisure time made possible by technological advance. Many must be reeducated to modern and new ways of working and living. High hopes are held that the White House Conference on Education, meeting this week, will come forth with a positive educational program for the Congress and the Nation.

Caution with respect to reducing total Federal receipts, of course, does not preclude giving serious consideration to changes in the Federal tax structure including, perhaps, shifts in the distribution of the tax load. The tax structure contains discriminations and inequities which call for correction. The possibility that changes may be needed to insure balanced growth in the economy should also be a matter of continuing concern. One week from today the Subcommittee on Tax Policy of the Joint Economic Committee, under the Chairmanship of Representative Mills, will begin extensive hearings on the relation of Federal taxes and tax policy to economic growth and stability. We believe this will be the most thorough study of the economics of our tax system and tax policy ever undertaken. From this inquiry there should emerge fresh insights into the major directions which tax policy should

follow to meet the Nation's growth requirements.

It should be emphasized that possibilities for Federal tax rate reductions during the next decade are good. International conditions and economic trends, of course, hold the key. If the world political situation does not worsen, and if we continue economic growth and maintain a stable price level, we would anticipate reduction in taxes of "perhaps 15 to 20 per cent below the hypothetical yield that could be expected from present Federal tax rates at levels of output and incomes estimated for 1965."[1/]

Monetary and Credit Problems

Let us turn now to current monetary and credit problems. Monetary policy in recent years has regained much of its former prestige. Flexibly used, it can help dampen excessive demand for goods and services in booms, and it can encourage economic expansion during periods of recession. Since the fall of 1954, with the economy experiencing one of history's most rapid advances from a recession, the Federal Reserve System has moved in the direction of restraint. It has taken a series of steps, including raising the discount rate from 1-1/2 per cent last spring to 2-1/2 per cent ten days ago. Open market operations have been conducted with the same objective of exercising restraint. The down payment provisions and other terms of the FHA-VA programs were tightened in July.

The policy of general credit restraint is being continued unabated. While the overall stabilizing effects are desirable, important economic

1/ For projections, see Potential Economic Growth of the United States During the Next Decade, Materials prepared for the Joint Committee on the Economic Report by the Committee staff, Committee Print, October 1954.

problems result none the less. Residential construction is feeling the pinch, and even though financing terms are relaxed, housing starts will fall unless a relatively large volume of credit is made available. Interest costs are rising, which directly intensifies the agricultural cost-price squeeze. We would hope that these credit restraints would merely postpone expenditures to a later time when they could be made without pushing up prices. But part of the effect of restraint on expenditures may be felt later. The lags which occur may result in reduced spending by State and local governments, by private business for plant and equipment and inventories, and by potential home owners not only now, when perhaps justified, but later when they may be needed to sustain economic growth. Present indications of plans for high and rising levels of expenditures for plant and equipment and non-residential construction in 1956 suggest that these groups have not felt undue restraint as yet from monetary policy, even though the effect may become apparent later in 1956.

There is perhaps a tendency today to place too much confidence on monetary policy alone as an effective stabilizer, forgetting that it is not a perfect or complete tool in itself but only one of several. While it has slowed, it certainly has not stopped the rise in industrial prices during recent months. A ground swell of consumer and business expansion can be only tempered by monetary policy. If monetary restraint tries to carry too big a load it can interfere with a sustainable rate of growth or the achievement of other national objectives.

Thus, monetary authorities have the delicate task of maintaining just the right balance and of detecting quickly signs that restraint is becoming excessive. They must be prepared to reverse policy before the economy's growth is checked and unemployment created. Monetary policy should

be used jointly and consistently with other government programs. It would seem inconsistent, for example, to pursue a restrictive general credit policy with rising interest rates and at the same time legislate general tax cuts on the grounds that the economy needed stimulation.

Problems of Agriculture

It may be presumptuous for me at this particular forum to touch on the current farm question. Yet how can it be ignored within the context of the subject assigned me? Current trends in American agriculture undoubtedly rank as the number one domestic economic problem.

Most industries since World War II have been relieved of the problems of excess capacity that plagued them during the late 1920's and throughout the 1930's. Agriculture, however, still faces the problem of excess capacity and mounting surpluses. Production volume this year is nearly 50 per cent above pre-war. Advancing productivity has given us this output on approximately the same number of acres, with about 20 per cent fewer farm units and with some 30 per cent fewer farm workers. Even if markets are expanded and other outlets utilized, further adjustments of farm operations appear needed to enable farmers to participate fully in the benefits resulting from rising national income.

Agriculture has received a declining share of national income during recent years, both absolutely and relatively. Average net income per capita of the farm population from agriculture declined about 6 per cent from 1952--when the parity ratio stood at 100--to 1954. If income from all sources is included, the decline has been about 4 per cent. With aggregate realized net farm income declining 10 per cent this year the per capita situation, of

course, has worsened considerably further. Other segments of the economy have registered real gains on whatever basis you wish to calculate them during this same period. Indications are that this adverse trend in the farm sector which started under previous programs will continue if left to present programs until the day the huge surpluses are somehow disposed of and the Nation's population and demand grow to match our productive capacity.

Probably the most disturbing current fact which reflects the problems of agriculture is the disparity of price movements--the prices of things the farmer and all of us have to buy, on the one hand, and the prices of products the farmer has to sell on the other. Had farm prices not been declining in recent months we would be experiencing an alarming rise in general price indices. Wholesale prices of other than farm products and foods have advanced 3 per cent in the past 4 months while, in the same index, the price of farm products declined 7.2 per cent, and processed foods declined 4.7 per cent. We can claim general price stability only because of falling farm prices.

The Joint Economic Committee has urged for several years that every effort be made to find outlets at home and abroad for farm surpluses. Some important steps have been taken, but more are needed. In some instances, such as cotton, we are losing our traditional markets. We need to find better means of competing on a fair basis with other countries whose production for export is growing. But shortsighted attempts to unload our surpluses could have adverse effects, not only on world markets, but on ourselves. If a food disposal program could be tied to an investment program in underdeveloped areas important objectives could be furthered. While it is difficult to devise programs of use which do not interfere with present markets, we know there are

vast unfilled needs for food and fiber in this country and abroad.

The need for outlets abroad for our farm products has brought renewed interest in foreign trade. The Foreign Economic Policy Subcommittee of the Joint Economic Committee has just completed hearings on this subject. Perhaps the most pressing and the most troublesome of this country's immediate foreign trade problems concerns East-West relations. If we could use trade with the Communist bloc to break down the Iron Curtain and to undermine the drive of the Kremlin for political domination over other countries, we would have much to gain from such trade, politically as well as economically. But, if trade merely relieves the Kremlin of trying to meet civilian shortages and military stockpile requirements of food and fiber, so that it can devote increased energies to armaments and imperialism, then the free world must continue to control trade with the Iron Curtain countries. Unfortunately for domestic exporting industries, broad political considerations must govern United States actions in dealing with this problem.

Understanding the current farm problem might be aided by dividing it into two somewhat arbitrary segments. First, the problems of full-time commercial agriculture composed of well-equipped farms of sufficient size to produce a satisfactory family income if reasonable prices prevail. This group constitutes about 35 per cent of farm operators who produce about 85 per cent of farm products marketed.

The problems of commercial agriculture are largely those of the market place, and they stem from the difficulties of making production adjustments, of expanding consumption, and of stabilizing prices and income.

From an economic standpoint there is much to be said for the use of a program of direct payment to farmers which would limit the amount of payment to a single individual. But there is also something to be said for a price support system for some commodities. One of the elements in maintaining economic growth is a fairly stable price level. Therefore, we should do something to reduce the gyrations in farm prices which come out of relatively small changes in crop production. We need a workable program for taking excesses off the market when yields are large, and increasing marketing from stock when crops are short.

The second segment of agriculture consists of the other approximately 65 per cent of farm families. In addition to the problems of commercial agriculture already mentioned, these farmers presently have insufficient land, equipment, and, in many cases, training to produce a satisfactory living unless their incomes are augmented from non-farm sources. Too often these other sources are not available. The Department of Agriculture has recently estimated that in 1950 there were over 1 million farms and a rural farm population of over 5 million in areas characterized as possessing serious low-income problems.[2/]

Low incomes obviously mean very low levels of living for these farm people. But they also have an important bearing upon the performance

2/ Development of Agriculture's Human Resources: A Report on Problems of Low-Income Farmers, U. S. Department of Agriculture, April 1955.
For additional information see Underemployment of Rural Families, Materials prepared for the Joint Committee on the Economic Report by the Committee Staff, Committee Print, February 1951.

of the rest of our national economy and upon our goals for preservation and strengthening of the free world. For to the extent that these low incomes result from underemployment, they represent to the rest of the nation a loss of otherwise available markets for goods and services that it has the capacity to produce. The loss of these markets, in turn, means for the rest of the nation a lower level of employment and income, a lower level of living, less inducement for new investment and consequently a lower rate of economic growth than it would otherwise have. The magnitude of these losses, like the magnitude of underemployment in American agriculture, cannot be precisely estimated. However, if the nation's farm families now having money incomes of less than $2,000 per year could increase their incomes to $2,000, without adversely affecting the incomes of other people, this would give them in the aggregate about $3 billion more per year to spend than they now have. This addition to their spending power would undoubtedly increase employment and incomes available to the rest of the nation's people by fully as large an amount.

During recent years the Joint Economic Committee, under the leadership of Senator Sparkman and Senator Flanders, has intensively studied the problems of the low-income farm family. The President, the Department of Agriculture, and other Federal departments have recently made recommendations. Important bills providing comprehensive programs with Federal assistance for this important group are pending in the Congress. It is generally agreed that a balanced program should encourage industrial development within the area, stimulate out-migration to relieve population pressures, and technical assistance and credit to help farmers reorganize and enlarge their farming operations.[3/]

3/ See Hearings before the Subcommittee on Low-Income Families of the Joint Committee on the Economic Report, November 1955 (available in December 1955).

Problems of Low-Income Families
and Chronically Distressed Areas

In addition to the problems of rural low income are the problems of urban families and areas which--even in times of bountiful prosperity--experience excessive chronic unemployment, low income, and economic distress. The Census Bureau has estimated that the number of families with incomes under $2,000--measured in constant 1948 prices--did not change between 1948 and 1954. There were about 9.5 million such families.[4/] Some in this group have a satisfactory income and level of living. Many others will continue to need assistance. But large numbers can be more productive, self-supporting, independent citizens if given an opportunity. Maintaining general prosperity is the first essential step. Beyond that, experts agree that in the long run expanded and broad education and health programs offer the best hope for increasing the productivity of this group.

A related problem is that of distressed areas where general economic activity is on a low plateau or actually declining. In September of this year, there were 26 major labor market areas showing "substantial labor surplus." There were 94 minor areas so classified. These persist in the midst of the record-breaking prosperity. The Department of Labor estimates there are over 500,000 persons unemployed in these areas alone, or about one-fourth of the nation's total unemployment.

A clear need exists for action on a comprehensive distressed-area program. A program should be designed to deal with the problems of all distressed areas, whether they originate from competition of imports, from automation, from shifts in population, from changes in market tastes and demands, or from other causes. This comprehensive program should provide

4/ See Characteristics of the Low-Income Population and Related Federal Programs, Selected Materials Assembled by the Staff of the Subcommittee on Low-Income Families, Joint Committee on the Economic Report, Committee Print, October 1955.

for technical assistance to individuals and groups or community organizations, for Federal credit in limited amounts where needed, for education and training and retraining of workers, and for assistance in the relocation of workers willing to move to areas of greater employment opportunity. Senator Douglas has a comprehensive distressed area bill pending in the Congress. The White House recently promised to submit a proposal in January.

Conclusion

In conclusion, let me say that the problems which I have discussed today are not insurmountable. We have the wealth, the human and material resources, the skill, and the free institutions to solve them. It is important that we make the adjustments necessary to enable the entire economy to expand at rates consistent with the increase in the labor force and in productivity. This is the challenge to public and private policy-makers in the coming year.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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THE OUTLOOK FOR EGGS AND POULTRY IN 1956

Statement presented by Edward Karpoff at the
33rd Annual Agricultural Outlook Conference,
Washington, D. C., November 30, 1955

The year 1956 promises to be another year of large output for the poultry industry. Both egg production on farms and broiler production will probably equal or slightly exceed their record-highs of 1955, and turkey production is likely to increase beyond the record of 1954. (Turkey production in 1955 is 4 percent below 1954.) Because of these prospective large supplies, prices are likely to average lower than this year, despite continued strong demand.

While there are specific factors indicating large production for the respective poultry commodities, there are also general factors which apply across the field and will tend to expand output. The entire poultry industry is gradually applying new production techniques which reduce unit costs of production. Prices for eggs, broilers, and turkeys have generally been above 1954. There is a great pressure on farmers to seek enterprises that offer prospects of bolstering farm income, and the favorable recent experience with poultry makesthis a natural choice, particularly while feed remains lower-priced than a year ago.

- RECORD OR NEAR-RECORD PRODUCTION -

The production of eggs, broilers, and turkeys, remember, will likely be of record or near-record proportions. For the first 6 or 7 months of 1956, egg production will be from an egg-laying flock 2 or 3 percent smaller than a year earlier, but an extension of trends toward higher rate of lay per bird will likely bring egg production close to year-ago levels. Later in the year, flock numbers will reflect the number of replacement chickens raised, and this figure is likely to be up, rebounding from the record-low level of replacement chickens raised in 1955. The flock in the fall of 1956 is therefore likely to be larger than this fall, and rate of lay then is likely to be up again. The year 1957 will likely open with more layers on hand than are expected for January 1, 1956.

The broiler industry is geared to a high level of production, and there will be pressures to use its large capacity in 1956. The typical financiers of broiler production--feed dealers, hatcheries, and processors --recognize that large broiler production assures them of high-level operations for their businesses, and they are willing to supply liberal credit as an alternative to incurring other types of selling expenses. Meanwhile, farmers will be willing to undertake broiler projects because under current financing plans they have opportunities for income without having risked any of their own money.

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The incentives for expanded turkey production are much the same as for broilers. Feed-dealer financing is becoming increasingly important for that enterprise. Growers had a better year in 1955 than in 1954, especially for early turkeys, and will want to try again on a larger scale. Feed prices will continue below the year earlier thru the first half of 1956. The sum of these effects indicates larger production in 1956.

- 1955 POULTRY PRICES ABOVE 1954

While the price outlook does indicate generally lower poultry product prices for 1956 than 1955, the experience of 1955 indicates that we must look beyond the mere level of supplies to gain an insight into the price prospects for the coming year. In 1955, egg production was record-high, with supplies supporting a record per capita consumption, slightly above the year before; yet farmers' egg prices for 1955 will average about 5 percent above the previous year. Broiler production is likewise record-high by a small margin, perhaps 2 percent above last year, and yet broiler prices for the year to date average 11 percent above 1954. Although the turkey crop is down 4 percent (by head count), the 9 percent price increase above 1954 for that commodity in August-October prices would seem more than is proportionate to the rather modestly decreased supply.

What are the special factors that seemed to buoy poultry product prices in 1955, and what are the chances that they will recur in 1956?

Demand has been strong through 1955. By definition, that is a fact, because large quantities of eggs and poultry meat have cleared the market at higher prices. Increases in poultry product prices in 1955 were greater than would be indicated by the increases in the conventionally accepted determinants of demand such as population, employment, and disposable income. The question, then, is: are there any special demand factors in 1955 or in prospective 1956 whose presence or absence will affect the price level at which 1956 egg and poultry meat production will be sold?

For eggs, a price bulge occurred in late January, February, and March, which had unusual origins, and hence is not likely to recur. There were some technicalities in settling the January egg futures contract, which buoyed prices in late January, then the weather closed in, restricting supplies of eggs and further sustaining egg prices. The result was that average farm egg prices in mid-February and mid-March were higher than at any time in the preceding fall. It would be fortuitous and beyond the scope of prediction if such developments were to recur in 1956.

-CONFIDENCE IN-LATE-1955 EGG PRICES -

Later in the spring, 1955 egg prices were supported by the knowledge of the smaller hatch then in progress, and the belief that egg production in the fall would be less than the year before. In anticipation of this, storers put away 40 percent more shell eggs than in the preceding year, and 5 percent more frozen eggs. The general attitude toward egg prices was one of confidence.

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Despite the fact that monthly egg production in each month of this fall and winter has been higher than last year, prices of fresh eggs did go up, and to that extent the springtime optimism was justified. But prices rose little more than to cover storage costs for frozen eggs, and meanwhile actually declined for stored shell eggs, whose springtime diversion from market channels was essential for maintaining reasonable springtime prices. With that unfavorable experience, storers and speculators are likely to be less active in the 1956 springtime egg market than they were in 1955, especially if the expectation is correct regarding a larger replacement flock being raised. The absence in the spring of 1956 of this year's favorable demand for eggs for storage would bear heavily upon egg prices in the second quarter of the year.

Soon after mid-year 1956, egg production will likely rise above the corresponding monthly outputs of 1955. In 1955 there was ample evidence that a larger output does not necessarily have a devastating effect on price, since on July 1 and again on August 1 the daily rates of egg production were respectively 9 and 8 percent above a year earlier; while the mid-month farm prices that followed those dates were likewise above 1954, by a cent or two. But on those dates the belief still persisted that egg production in the coming months would shrink in relation to the year before, that egg prices would therefore rise, and that eggs therefore were good property and that confidence in their value was justified. For prices of fresh eggs, this confidence was amply justified, although the premise on which it rested-- a reduced shell egg production relative to the year before --has not yet developed, and now is recognized as not likely to develop in the remainder of the year.

- INFLUENCES ON BROILER PRICES -

For broilers, an extremely short supply in the first quarter of 1955, reduced competition from farm chickens during the summer, and perhaps an unusual summertime demand for chickens were factors which resulted in a January - September broiler price averaging 26.7 cents per pound, contrasted with 24.0 cents the year before.

During this period, the peak mid-month price occurred in March, when marketings were from placements averaging about 11.9 million chicks weekly in 13 important areas. That level represented a cut of 15 to 20 percent from 4 and 5 months earlier.

Prospective marketings for March 1956 will be from chicks to be hatched from eggs not yet set in incubators, so we cannot safely anticipate March numbers. But eggs are already in incubators to make February marketings, and they indicate chick placements at the rate of 14.5 million weekly. This is only a 3 percent decrease from October placements, although a 15 percent decline from the all-time high of July 1955. Recent rates of egg settings and chick placements have been about 25 percent above a year-ago. Therefore, if any substantial reduction in broiler marketings is to occur early in 1956, the basis for it is not yet apparent.

Toward the middle of 1955, broiler prices reflected the reduced supply of young farm chickens, the by-product cockerels which at that season compete with commercial broilers. Such marketings of young farm chickens were presumably reduced 15 percent from the year before, in line with the reported decrease in the number of replacement chickens raised. Spread over the year, these by-product cockerels are not of great importance in comparison with broilers, but in July, August, and September they probably comprise about one quarter of the usual marketings of young chick ens (commercial broilers plus young farm chickens). Therefore, the 15 percent reduction in the supply of young farm chickens may have offset a significant part of the relatively small increase in the broiler placements which were the basis for July and August broiler slaughter. These placements were about 5 percent above the previous year in the months affecting July and August slaughter, and ranged up to 20 percent higher after that.

Another possible factor bearing upon 1956 broiler prices concerns the popularity this year of outdoor cookery and chicken barbecues. Chicken lends itself well to this sort of activity, as well as to indoor hot-weather cooking and menus. The fact that the landscape gardners this summer were advising barbecue pits and braziers may have given a fillip to the demand for chicken.

Broiler prices in the last 2 months have been down sharply, to a U. S. average level of 22.3 cents per pound in mid-October, compared with 26.7 cents for January-September. Part of this decline is seasonal and part is induced by the large supplies and reduced prices for beef and pork. The additional competition from red meats is likely to persist well into 1956.

Of these factors which bore importantly upon 1955 broiler prices--(1) reduced early-season supply, (2) fewer young by-product cockerels, (3) summer-time demand, and (4) competition from red meats--present indications are that the first and second, which were favorable, will not be repeated, and that the fourth, which is unfavorable, will continue with us for some months. On balance, it looks like a somewhat lower average price for 1956 than the 26.3 cent average for the first 10 months of 1955.

- INTENTIONS FOR 1956 TURKEYS -

For turkeys, the present outlook for 1956 can perhaps best be summarized by pointing to farmers' likely reactions to recent turkey prices. Even at the price level that has held since early October, 1955 turkey production was more favorable to growers than was 1954, with the mid-October turkey-feed price ratio 2 points higher in 1955 than 1954. Feed costs in recent months have been about 9 percent below the year before. In mid-October the U. S. average turkey-feed price ratio was 9.2 (pounds of feed equaling the value of 1 pound of turkey), 30 percent more favorable to growers than the year-ago ratio. Grower prices slipped from the 2 to 6 cents per pound above 1954, which they were at the beginning of October, to recent levels which have been 1 to 3 cents up from last year. The larger increase over last year has generally been for heavy-type hens.

These favorable changes from last year have induced a great interest in growing turkeys for 1956. The U.S.D.A. October 1 survey of intentions to keep breeders showed an intended 13 percent increase in the number of heavy breeders, and an intended 7 percent increase for light-weight turkeys. At a meeting 2 weeks ago, the Turkey Advisory Committee of the Secretary of Agriculture affirmed that these intentions were then still valid. The publication of these intentions should be a factor inducing farmers to temper their intentions. If there is a reduction from these intentions before the first of the year, we will be able to say that the intentions have served a highly useful purpose, as a 1956 turkey crop up to the levels indicated by the breeder intentions would considerably exceed the record in 1954, when turkeys sold several cents per pound cheaper than at present.

Past experience has been that when large turkey breeding flocks have been carried into the hatching season, poult output and the number of turkey poults brooded has been almost correspondingly large. Turkey eggs ordinarily sell for so much more for hatching than for food, that sellers are often willing to make very substantial price concessions to turkey producers. By withholding artificial illumination, farmers do have the opportunity to defer a flock's egg production, and they may dispose of hatching-egg flocks before the hens have laid their last eggs. But diversion of turkey eggs from hatching outlets probably seldom occurs. Therefore, increased numbers of breeders, if they materialize, are likely to be followed by more poults hatched and turkeys raised.

From July 1 to October 1, 37 percent more heavy-breed turkeys had been tested than in the same months last year, and 26 percent fewer light-breed turkeys. In October, heavy-breed testings were 2 percent fewer than last year, but the cumulative total since July 1 is still 9 percent ahead of 1954. For light breeds, October testings were 8 percent larger than 1954, and cumulatively they are 33 percent under last year. To November 1 last year, 29 percent of the 1954-55 testings had been accomplished, so these early-season figures still give the industry the necessary leeway to have an effect upon the coming year's crop.

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THE GENERAL BUSINESS OUTLOOK FOR THE NEXT FEW YEARS

a talk at the

33rd Annual Agricultural Outlook Conference
Washington, D. C.

by

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New York City

It is relatively easy to forecast the general course of business over the next year or so. It is going to continue upward although necessarily at a more subdued rate than the boom that has surged during the last year. Physical limitations of manpower and materials will, of themselves, put some brakes on the boom.

It is also relatively easy to forecast where the economy will be five or ten or twenty years from now. Once you have established the increase in the work force, how much work it is going to do and how well, it's a matter of simple arithmetic. My arithmetic tells me that, in 1955 dollars, our Gross National Product will be about $440 billion in 1960 and about $500 billion in 1965. This is a physical increase of 14% for 1960, as compared with 1955, and an increase of 30% for 1965.

When I succumbed to the honor of participating in this outlook conference it was my understanding that I was to make a long-range economic forecast — a five or ten year job. In addition to being a simple task, it has the added advantage of being relatively safe. There is little likelihood of a close check-up of the handiwork involved. If forecasts of what is going to be happening in 1960 or 1970 are not forgotten when we get there, the forecaster has an excellent chance of being among the missing.

I have been told, however, that neither a short-run nor a very long-run economic forecast would constitute my most useful contribution to your sessions. What you need to know, I was given to understand, is how the American economy will be performing over the next three or four or five years. You want to know whether, in working out the price and production adjustments which clearly lie ahead in the next few years, agriculture will be operating in a relatively strong and stable economy, in a soggy and unstable economy, or in a bit of each.

To tell you this is a really tough job. The forecasting job takes you out beyond the period where the great momentum of the present boom can be counted upon to have any great force in shaping the course of events. It also takes you out beyond the time when well-developed business and government plans can have any clearly ascertainable impact on the course of the economy. At the same time it does not take you far enough to permit you to rely safely on long-term growth trends. In a word, the forecasting job involved takes you into the wild blue out yonder, with no anchors in the sky.

But I am both a brave and an accomodating soul. So I propose to tell you what the general course of our economy will be over the next few years, say the next five years. And I propose to do it just as dogmatically as if I knew. My purpose, however, will not be preachment but to stir up thinking on your part about possibilities which lie ahead.

With a few lapses of minor importance, our economy will be steadily expanding over the years immediately ahead and producing a consistently high level of prosperity. It will be doing this because forces are at work which will provide a stable and expanding volume of business investment, civilian consumer expenditure and government expenditure. I shall deal with the outlook for these major segments of the economy in turn. In the nature of the time limits imposed, it must be a case of once over lightly.

Historically the most unstable element in our economy has been business investment in new producing facilities. It was this central fact of instability in business investment, coupled with its crucial importance, upon which the whole system of Keynesian economics, which has cut such a tremendous swath in the United States, was predicated.

But that's all over now. Over the next few years business investment in new plant and equipment will be expanding and at a relatively stable rate. Two new, and I believe too little appreciated elements in our economy will make important contributions to this state of affairs. One is the growth of long-range planning of investment by American business corporations. The other is the tremendous expansion of all kinds of research.

In my office we have been making periodic surveys of plans for business investment in new facilities for the past 8 years. When we started out only a handful of the cooperating companies had any plans for capital investment beyond the year immediately ahead. Now about 90% of the reporting companies, and it is a far larger number of companies than that with which we started, can give us estimates of their capital expenditures for some years ahead.

Along with this increased emphasis on long-range investment plans has gone a greatly increased determination to stick to the plans, and thus be in a position to take advantage of the greatly expanded markets which lie ahead. In highlighting these growth potentials, long-range economic projections, of the type I mentioned at the outset, have played a very important role.

Another major force in stimulating business investment in new processes and equipment is provided by the tremendous volume of research of one kind and another being done these days. As a nation we are spending about $4 billion a year for research. About one-half of it is financed by government and about two-thirds of it done by private establishments. This is about forty times as much as we spend for research in the twenties.

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By this process we have, in effect, created a built-in burr under the saddle. New products, new processes, new equipment come tumbling out of the research laboratories at a rate and a volume which make the price of survival for most business firms and aggressive investment program. I don't know for sure what is the most dramatic aspect of the American economy today, but I suspect it is that provided by our $4 billion annual investment in research.

Since the end of World War II we have nearly doubled our manufacturing capacity in the United States. In the meantime, the economy as a whole has grown about 40%. I know that reflection about that pair of facts causes many of you to fear that continuation of a high level of investment in new producing facilities is going to sink us under the weight of excess producing capacity.

I am sure that this is not going to prove the case. I have already touched on one key reason. American business firms increasingly gear their capacity requirements to long-range programs rather than counting on keeping every bit of their equipment going all the time. Another key reason is that we need a large volume of investment to replace worn out facilities. This year more than half of our business investment is going for that purpose. Of the balance the larger part is not going simply to increase capacity, but to provide more efficient capacity or capacity to do entirely new things.

I have mentioned the pressure to do new things or do old things better which is being exerted by the research laboratories. This pressure is, of course, compounded by the pressure of increased costs to which even higher and higher wage rates contribute a decisive element. Thus we clearly have what it takes to produce the urge on the part of business to maintain a steadily increasing volume of investment in new facilities.

There remains, of course, the rather crucial question of whether business firms can get the money to fulfill this urge. This immediately involves taking a look at their prospective sources of capital funds.

Happily a look in this direction is reassuring. This year (1955) the reserves set aside by American corporations for depreciation will amount to about $14.5 billion. That's enough to cover well over half of their investment in new producing facilities. And these depreciation reserves will continue to increase in the years immediately ahead, to reach a total of about $20 billion in 1958. With depreciation allowances of this magnitude American industry will need to make only modest drafts on retained profits and the new securities markets to carry forward a steadily increasing program of investment in new producing facilities.

In addition, and a most important addition, we have a tested governmental device to stimulate business investment if, by some mischance, it should get to lagging in a disturbing way. The device is accelerated depreciation which, it has been clearly demonstrated by a $30 billion test of it, can be counted upon to give prompt and powerful leverage to business investment.

I realize fully that business investment in new plants and equipment is not a process that is carried on in a vacuum or at least a comfortably isolated compartment.

I am quite aware of the fact that over any considerable length of time this process is geared to what consumers are doing to take off the products being turned out by the new equipment.

Here again I find a reassuring prospect. We have a rapidly increasing population and a population in which I find no perceptible trend toward giving up the flesh pots. Also we have access to the basic resources to see that the flesh pots are well filled -- if that is what happens to enrich the flesh pots. There may come a time, of course, when added population is a curse, as it is already viewed in some parts of the world. But that time is obviously further down the road than the period with which I am concerned.

In the meantime, individual income is distributed very broadly and in depth, and we have a built-in device to increase the flow of this income steadily. As near as we can tell, wage and salary increases in 1955 are adding about $14 billion to the nation's disposable income, as compared to that of 1954. And for 1956 we already have another substantial increase in disposable income provided for by the long-term agreements governing industrial employment. For example, between provision made for so-called productivity increases and cost-of-living increases, it is estimated that the automobile workers already have about a ten-cent-an-hour wage increase arranged for next year.

As we have a governmental device ready at hand to perk up business investment if that becomes necessary, so we have a device to do the same thing for consumer income if by chance that is required. The device, of course, is a cut in the individual income tax imposed by the federal government. By next June, the federal cash budget will not only be balanced but there will be something to spare. An individual income tax cut of some billions of dollars can be safely made if it is necessary to keep consumer income expanding at a salubrious rate.

I recognize the danger that in some years (1956 has been mentioned as one of them) politics may intervene to dissipate this insurance policy for sustained consumer income before it is needed. And, of course, federal tax rates are now so high that it seems rather fanciful to refer to reduction of them at any time as a danger. But insofar as tax reduction may be particularly desirable to stabilize the flowof consumer income, I anticipate that considerable capacity to provide it, without being guilty of fiscal irresponsibility, will be available over the years ahead. In fact, it should help quite a lot to produce 1.4 million new families with annual incomes after taxes of more than $4,000 which are expected to materialize each year between now and 1960. These are the families which could do much to validate equally spectacular increases of such items as automobiles and houses.

It is not enough, of course, for consumers to have expanding money incomes. They must be possessed of an urge to spend most of the income on an expanding budget

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of goods and services. I am aware that it is at this particular point that some of you fear for the future. You see our people so surfeited with these gaudy new automobiles, household appliances that often work, food and entertainment that they will soon become less avid consumers, with very disturbing economic results.

I do not dismiss this worry lightly. I sometimes shudder to think what would happen if a great evangelist of asceticism and the simple life should come along and get command of our modern engines and mass communication and persuasion. He or she might wreck our economy. As a nation we have become so rich that we can take or leave a very large part of what is produced without any immediate personal inconvenience at all. I think the share is as much as 40% of the total. But if we left it, a great depression would not be far behind.

Happily, at least from the standpoint of keeping our economy going well, there seems to be little tendency on the part of the American consumer to exercise his option not to consume. Some impressive evidence has been brought to bear on this point by the Survey Research Center of the University of Michigan in its extensive surveys of consumer attitudes toward the purchase of various durable goods. In its sample interviews to date, this group has found no evidence that the inclination to buy diminishes as a family's existing purchases mount. Quite the reverse, families seem to want new-style versions of the goods they have now, just as soon as someone puts the new style on the market at a favorable price. We have just had a convincing demonstration of this fact by the automobile industry where record sales seem to be built largely on the fact that so many people are dismayed that the car they now own is of only one color. Equally impressive is the recent experience of the American Telephone and Telegraph Company which has uncovered new layers of demand for telephones by replacing the conventional black with bright colored instruments and even two-toned jobs.

Nonetheless, the large range of so-called optional consumption available to the American consumer obviously places the business of selling in a decisive position in our economy. I have confidence, however, that it will be dischargedin a manner to assure an upward tilt to the course of national consumption.

Beyond that, there is now reason to believe that the tremendous power of advertising will, if necessary, be used to stabilize sales in a manner it was never used prior to 1954. Then, for the first time in our history advertising volume was increased by 6% while sales were going down by 4%. Always before advertising and sales had gone up and down together. This little appreciated change in advertising practice last year is responsible in no small degree for the fact that the recent recession was one of the mildest on record.

I have now demonstrated, at least to my satisfaction, that we have in prospect a quite steadily expanding volume of consumer expenditure and business investment over the years immediately ahead. It remains only to take a look at what is in prospect in the realm of governmental expenditure and activity.

With the evaporation of the "spirit of Geneva" any near-term prospect that the federal government is going to be spending a much smaller proportionate part of our national income has alas, evaporated, too. Even if the spirit should return, any cut in defense spending is likely to be offset over the next five years by other demands. Our state and local governments are under the increasingly acute necessity of increasing their expenditures for public facilities such as highways, schools and systems to get and control water and keep it away. This will require both greater local expenditures and increased federal aid. So in government, too, we have the prospect of a steadily exparding economy.

I don't want to leave the impression that I believe there are going to be no bumps at all in the economic road ahead. I am sure that there will be some, and I think I know some of the reasons. One of them is that we still have most everything to learn about controlling business inventories properly. The swings in these inventories have been second only to changes in the rate of military expenditure in causing general ups and downs in business since World War II. I doubt if we will learn to handle them properly before they have caused some more ups and downs.

I also expect the ebbing and flowing of consumer credit to contribute to continuing ups and downs in the sale of consumer durable goods. In fact, I won't be surprised if over the next decade or two the traditional economic pattern is completely reversed and consumer expenditure, at least for durable goods, becomes a relatively unstable element in our economy while capital investment moves forward on a notably even keel.

But the ups and downs of business I envisage will stay within limits which prevent them from becoming destructive. The so-called built-in stabilizers in our economy will contribute to this end. As you well know, they include arrangements such as those for unemployment insurance and farm price supports. They also include an individual income tax which falls so fast with a decline in individual income that it almost, but not quite, makes it a pleasure to suffer a decline because if gives the tax collector such a beating.

But my primary reliance for sustained prosperity is not on "built-in stabilizers." It is on built-in growth elements which, in the very process of growth will iron out the downs, if not the ups and downs, in the general course of business. I have already listed such elements as population growth, broader income distribution, the steady flow of new products and processes from research, and the determination of business firms to plan and build for new markets and to carry out the plans. To all these growth factors in the U. S. economy, I should add a special factor,

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the industrial renaissance abroad and particularly in Europe. This, over the period with which I am dealing, promises to create an enlarged market for our products. Somewhere along the way, of course, it is also going to be reflected in some very rugged competition for foreign markets.

I realize that I have said a few things which may be slightly debatable. I may also have said a few things which may turn out not to be so. If so, I won't be completely devastated for, after all, in a five year tour of the entire American economy as it unfolds a history that hasn't taken place yet there is some little room for error.

I am completely confident, however, that over the years ahead the American economy is going to pay out on my expectation that, as a whole, it is going to work very well rather than becoming a prey to historic ills which grip the imaginations of so many Americans of my generation. I expect this to be the case regardless of which political party is in national power. My basic reason is that, in one way and another and with one party and another, we have gradually worked out a set of national economic policies which as a whole are working well and which, if moderately well-handled, promise to keep on working well. I don't think either party is going to kick them overboard to satisfy extremists in its ranks.

Unhappily, I do not expect the steadily expanding prosperity which I anticipate will automatically solve the problems of American agriculture. Difficult problems of adjustment will remain before agriculture will be moving along in the full flood of expanding prosperity. But because the economy as a whole will be having the happy experience I have sketched -- in what have necessarily been rather broad strokes -- the adjustments will be far easier to make than otherwise. Thus, even for you who work in agriculture, I have essentially a cheering report to make. I am happy that it turned out that way. When one works in a field of pure science, as the business forecaster does, one can never tell how things will turn out.

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CLOTHING CONSUMPTION TRENDS

Address by Helen Humes Lamale, Prices and Cost of Living Division, Bureau of Labor Statistics, U. S. Department of Labor, at the 33rd Annual Agricultural Outlook Conference, Washington 25, D. C., Tuesday, November 29, 1955

The outlook for the clothing market, which we have just heard, is certainly a favorable one. Similar forecasts have been made in the recent past. Fortune Magazine's analysis of the Changing American Market in early 1954, summed up the prospects for apparel as a "broader and brighter market." Yet, we continue to hear industry reports of "hard times" and concern for the future. What accounts for these contradictions? What has been happening to the consumption of clothing in this country, and what can be expected in the near future? There are two important sources of answers to these questions, the Department of Commerce series on "Personal Consumption Expenditures" and the consumer surveys made from time to time by the Bureau of Labor Statistics and the Department of Agriculture.

Let us look first at what the national aggregates tell us about clothing consumption trends. Aggregate expenditures in 1954 for clothing, accessories, and jewelry, were 24½ billion dollars, or about 6 percent higher than the average for the post-war years 1947-49, and only about 1 percent less than the peak level reached in 1952. These totals tell only part of the story, however. Much of the increase resulted from population growth and from increased prices. If we look at the indexes in table 1, we note that 1954 per capita clothing expenditures were about 4 percent less than the 1947-49 average, and when adjustment is made for the price changes, per capita expenditures in 1954 were 8 percent less than the 1947-49 average, and about 25 percent under the immediate post-war high. Even on this basis, 1954 expenditures were substantially above the pre-war levels.

This would indicate, what one is able to guess from general observation, that clothing consumption habits have changed appreciably in the past few years. No one will question the fact that there is, as Mr. Covins has pointed out, an ample supply of clothing which is "more durable, more comfortable, and more easily cared for", and that the level of employment and income is sufficient to support a high level of clothing consumption. Why, then, does the expenditure trend appear to be going down or, perhaps, leveling-off at less than peak volume? The answer lies in the changing pattern of consumer preferences with respect to clothing, and the relative importance which consumers place on clothing in the total budget; both of which reflect the changes in the manner of living which have occurred in the past decade.

NOTE: Opinions expressed in this paper are those of the author and do not necessarily represent the position of the Bureau of Labor Statistics or the U. S. Department of Labor.

The decline in total clothing expenditures in spite of increasing production and prices indicates that consumers are buying different kinds of clothing. The shift of preferences to informal, easily cared-for clothes was a natural outgrowth of our post-war way-of-life. Clothing manufacturers have referred to it as a "revolution". Many factors contributed to it—the growth of the suburbs, early marriages, the increase in size of families, the "do-it-yourself" trend for household chores; in general, a new informality of living at all income levels.

Clothing has held a dual position in the family budget—it is a necessity, and also an item of prestige or conspicuous consumption. In the early part of this century, with the strict adherence to formal customs and conventional dress, an increase in a family's economic position could most readily be advertised by an improvement in the way the family dressed. Thus a rising income could be expected to emphasize the prestige role of clothing expenditures. Signs of weakening in this role of clothing were evident before the war, when ownership of an automobile and modern household equipment competed with clothing as a mark of the family's economic well-being. In the pre-war years clothing expenditures were relatively sensitive to changes in income. In the post-war expenditure aggregates, they have been among the least sensitive. We might look for the reason by comparing changes in clothing expenditures in the post-war years with changes in the expenditures for competing items. It is evident that the spectacular increases in the purchase of automobiles, television sets, and furnishings and equipment for the new post-war homes have taken many of the dollars which might have gone to clothing under pre-war spending patterns. Expenditures for automobiles in 1954 were 70 percent above the 1947-49 level, radios, television receivers, records, and other musical instruments, 45 percent above, and furniture 23 percent above. Even when allowance is made for the price increase in these items, they all show considerably larger growth than expenditures for clothing.

As a result, expenditures for clothing have accounted for a continuously decreasing proportion of total spending since the peak in 1945, when the total clothing group accounted for 16 percent of total consumer expenditures, and expenditures for clothing and shoes, 12½ percent. In 1954, 10.4 percent of total consumption expenditures were accounted for by the total clothing group, and 8.2 percent by clothing and footwear, alone. It should be recognized that the clothing expenditures during the war years accounted for an abnormally high proportion of total spending, and reflected the fact that during a period of high incomes and high employment many commodities, particularly durable goods, were not available. However, the current proportion of total spending allocated to clothing is below that generally prevailing in the pre-war years. Thus, if the health of the clothing market is to be judged by whether it is maintaining "its share" of total spending, or getting "its part" of increased income, there may be some cause for alarm. It is at this point that one must go beyond these aggregate figures to evaluate the determinants of the level of clothing expenditures at a particular time.

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The consumer expenditure surveys which have been made from time to time since 1888 by the Federal Government provide the means for determining what factors influence family expenditures for clothing. The most recent study covering all U. S. families, farm and nonfarm, is the 1941 Study of Spending and Savings in Wartime, but many studies of more limited coverage have been made in the post-war years.

The Department of Agriculture's 1948-1949 study of clothing expenditures by city and farm families in the Minneapolis, Minnesota area provided valuable information on the similarities and differences in clothing purchase habits of city and farm families of comparable income level and household composition. The Studies of Family Clothing Supplies showed that farm families purchase almost as much clothing as city families, if the comparison is made of families in the same part of the country, and similar in size, income, and occupation. Next year's study of farm family expenditures will shed more light on the subject.

The Bureau of Labor Statistics 1950 Survey of Consumer Expenditures in 91 cities, which is now being tabulated in detail will furnish much needed insight into the effects of various family characteristics, such as income, size, age, composition, on clothing expenditures, and comparison of this study with those of earlier years will give us a clue to the direction clothing expenditures may take in the future. Analyses of these studies with respect to expenditures for food and housing have revealed a marked stability in the relation of these expenditures to income over time. Deviations from these stable relationships can be explained by changes in the price level and, for food, by changes in family size. Similar analyses of clothing expenditures indicate that they are subject to more, and perhaps varying influences. The preliminary data, however, do show interesting and fairly stable relationships within total clothing expenditure and from place-to-place.

When the 1950 expenditures are classified by three broad regions (North, South, and West) and three types of cities (large cities, suburbs of large cities, and small cities), more similarities than differences are evident (see table 2). Among the regions and city types, the proportion of disposable income spent for clothing varied within the narrow range of 9.6 to 12.4 percent, even though average income varied from a low of $3,071 to a high of $4,690 and average family size from 2.8 to 3.3 persons. Except for the West, there was greater difference in the clothing spending pattern among city types within a region than between regions for the same type of city.

The importance of suburban living on the families clothing expenditures is evident from these averages. In spite of higher average incomes and larger average family size, suburban families spent a lower proportion of their income for clothing than did families in either large or small cities. It is of interest to note that the proportion of home-owning families in suburban areas was from 63 to 65 percent, as compared with 51 to 56 percent in small cities and 39 to 50 percent in large cities. Tabulations which would illustrate the relative level of clothing expenditures for

home owning and renting families are not yet available. However, it appears reasonable to believe that the greatly increased acquisition of homes and the long-term commitments in connection with their purchase and furnishing have had an important effect on the relative importance which a family gives to its clothing.

The general similarity in the way families distribute clothing expenditures among family members is also evident from these tabulations. The proportion of total clothing expenditures allocated to women and girls ranged from 45.0 percent in small cities in the West to 52.6 percent in small cities in the North. Clothing expenditures for men and boys accounted for 34.2 to 40.3 percent of the total clothing expense. Expenditures for clothing for infants were 1.3 to 1.8 percent of the total. This includes only the expenditures of families for infants in the families, and does not include expenditures for gifts of clothing to infants outside the family, or the value of gifts received by infants in the family. Thus, the low level of expenditures reflects both the relatively small proportion of families with infants under 2 years, and also the importance of such clothing as gifts.

The slightly smaller relative importance of expenditures for clothing for women and girls in the suburbs probably reflects what has been observed in earlier surveys—that, although on the average, women do spend more than men for clothing, mothers of small children spend less than their husbands, provided they are not employed outside the home.

Expenditures for clothing services, which varied from 11.7 to 16.1 percent of total clothing expenditures were highest in the South and lowest in the North in all three types of cities. There is considerable speculation on how the cleaning business has been affected by the increased washability of the new synthetic fibers which are being used for garments formerly made of fabrics requiring dry cleaning. Some evaluation of this may be possible from a comparison of the pre- and post-war survey data when they are available in more detail. However, since much of the increased use of these fibers for menswear has occurred since 1950, the available expenditure survey data are already out-of-date for this purpose.

The broad class averages shown in table 2 conceal some differences which are revealed by the extensive tabulations of the data by cross-classifications of families by characteristics which affect clothing expenditures. Average expenditures of families of different sizes within these regions and classes of cities show, for example, that single consumers in large cities in all three regions spent substantially more than single consumers in small cities. That this is probably a difference associated with city size and not merely the reflection of the lower income level of single consumers in small cities is confirmed by a comparison of the average expenditures of consumers with income under $2,000 in the large and small city groups. For such consumers also, large city clothing expenditures exceed those in small cities.

It is the analysis of the survey data classified by income and family composition, including the age of family members, which is most helpful in appraising the outlook for clothing consumption. When what we know from these surveys about the spending patterns of families at different income levels and family composition is related to what we know about the age and income level of the population in the immediate future, the forces back of the aggregate data are more understandable and forecasts made with more assurance.

The family surveys have shown that generally in families of the same size and income level, young men and women spend more than older persons for clothing. The 1950 expenditures for women's and girls' clothing by two-person families with incomes of $3,000 to $4,000 in large cities in each of the three regions illustrate this. They were as follows:

	Average expenditure per family for women's and girls' clothing by age of family head		
	Under 25 years	25 to 35 years	65 to 75 years
Large Cities - North	$193	$203	$130
South	215	190	175
West	189	141	94

When sample surveys aretabulated in such fine classifications as this, the sampling errors of the averages are large and so the absolute differences in these average expenditures must be used cautiously. The importance of quoting them for the present discussion is to point out the importance the age distribution will have on aggregate spending for clothing in the next few years.

The proportion of the population over 65 years old has been increasing in the past few years and is expected to continue to increase. This will probably exert a dampening influence on the trend of clothing consumption. However, the rapidly growing-up war babies are causing large increases in the older children and teenage groups where clothing expenditures are relatively high. The high proportion of children under 5 years during the late 1940's and early 1950's tended to hold percapita expenditures for children's clothing at a lower level than can be expected for some years to come.

Prewar family surveys have shown that although the average expenditures increase with income and family size, the proportion of clothing expenditures to income is rather stable over a broad middle-income range and tend to decrease at very high income levels. Similar relationships appear in the 1950 data. Average clothing expenditures per family

(including clothing services) were about 11 or 12 percent of disposable family income in each of the three $1,000-income groups between $3,000 and $6,000. This is about the proportion reported by city families in 1941, but below that reported in the cities surveyed in 1945 through 1949.

When the expenditure trends shown by the national aggregate data are examined in light of the spending patterns exhibited by the family surveys, there is reason to be optimistic about the future demand for clothing. On any basis, total or per capita, clothing consumption is at a high level compared with pre-war years. Although families are spending a smaller part of their incomes for clothing than in the war and immediate post-war years, and these expenditures appear to be subject to a greater variety of competition, the population growth and changes in the age and income distribution of families should give rise to higher expenditures.

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Table 1

INDEXES OF EXPENDITURES FOR CLOTHING, ACCESSORIES, AND JEWELRY
(1947-49 = 100)

Years	Index of Aggregate Expenditures	Index of Per Capita Expenditures in current dollars	Index of Per Capita Expenditures in 1947-49 dollars
1929.....	48.3	58.0	96.4
1930.....	41.9	49.8	84.5
1931.....	35.5	41.6	77.5
1932.....	26.1	30.3	63.7
1933.....	23.5	27.1	59.2
1934.....	28.3	32.8	65.5
1935.....	30.3	34.7	68.7
1936.....	33.1	37.8	74.4
1937.....	34.9	39.7	73.7
1938.....	34.5	39.1	73.1
1939.....	36.3	40.3	76.9
1940.....	38.2	42.2	79.4
1941.....	45.4	49.8	89.5
1942.....	56.5	61.8	95.2
1943.....	69.2	75.0	110.9
1944.....	75.6	83.2	114.7
1945.....	85.1	93.9	122.9
1946.....	95.9	100.2	119.7
1947.....	99.1	100.8	104.0
1948.....	103.1	102.7	98.9
1949.....	97.9	96.4	97.1
1950.....	98.0	94.5	96.4
1951.....	104.6	99.6	93.3
1952.....	107.1	100.2	94.5
1953.....	106.3	98.3	93.9
1954.....	105.9	95.8	92.0

Source: Derived from Personal Consumption Expenditures Series, Office of Business Economics, and Population Estimates, Bureau of the Census, U. S. Department of Commerce.
By Division of Prices and Cost of Living, Bureau of Labor Statistics, U. S. Department of Labor.

Table 2

SURVEY OF CONSUMER EXPENDITURES IN 1950
FAMILY CLOTHING EXPENDITURES: BY CLOTHING GROUPS IN
THREE CITY CLASSES WITHIN REGIONS

City class and clothing group	Region					
	North		South		West	
	Average	Percent	Average	Percent	Average	Percent
Large cities						
Total clothing.....	$457	100.0	$412	100.0	$423	100.0
Women's & Girls' clothing	228	49.9	200	48.5	204	48.2
Men's & Boys' clothing...	161	35.2	141	34.2	151	35.7
Children under 2 years...	7	1.5	7	1.7	6	1.4
Clothing Services.....	61	13.3	64	15.5	62	14.7
Total clothing expenditure as a percent of disposable income.....		11.5		11.7		10.9
Average disposable income..		$3,958		$3,514		$3,887
Average family size 1/.....		3.0		3.0		2.8
Suburbs						
Total clothing.....	$452	100.0	$435	100.0	$414	100.0
Women's & Girls' clothing	207	45.8	201	46.2	190	45.9
Men's & Boys' clothing...	182	40.3	156	35.9	155	37.4
Children under 2 years...	8	1.8	8	1.8	7	1.7
Clothing Services.....	55	12.2	70	16.1	62	15.0
Total clothing expenditure as a percent of disposable income.....		9.6		10.5		10.2
Average disposable income..		$4,690		$4,124		$4,065
Average family size 1/.....		3.2		3.3		3.1
Small cities						
Total clothing.....	$411	100.0	$381	100.0	$422	100.0
Women's & Girls' clothing	216	52.6	182	47.8	190	45.0
Men's & Boys' clothing...	141	34.3	138	36.2	169	40.0
Children under 2 years...	6	1.5	5	1.3	6	1.4
Clothing Services.....	48	11.7	56	14.7	57	13.5
Total clothing expenditure as a percent of disposable income.....		11.2		12.4		10.8
Average disposable income..		$3,666		$3,071		$3,894
Average family size 1/.....		3.1		3.3		3.0

1/ Includes 1-person families.

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OUTLOOK FOR DAIRY PRODUCTS IN 1956

Statement presented by H. C. Kriesel at the
33rd Annual Agricultural Outlook Conference
Washington, D. C. November 30, 1955

The past year has brought about improvement in some of the economic conditions facing dairy farmers. However, the dairy industry as a whole is still going along in a condition of "uncertain disequilibrium". That there is disequilibrium is not questioned. Not only does supply exceed demand at support levels but returns to farm labor resources engaged in dairying continue relatively low. The uncertain element concerns the probable duration and magnitude of the disequilibrium.

Production of milk showed some signs of stabilizing in 1954 and early 1955 after an unprecedented rise from 1952 to mid-1954. In 1954 and 1955, prices to farmers for milk and butterfat have been below average relative to beef cattle, but have been above average relative to hogs since August 1955. Serious drought in many portions of the country also restricted milk flow in the summer and early fall of 1954, though total output was above a year earlier most of the time. From December 1954 to the spring of 1955, production was significantly below that of a year earlier. However, with stable prices to farmers for milk compared with reduced prices for feeds and some other items, production began to expand by the second half of 1955. In recent months the flow has been several percent above a year earlier. Production for the calendar year 1955 will be 124.5 billion pounds to 125 billion pounds as compared with 123.5 billion in 1954 and 121.1 billion in 1953. The number of milk cows on farms probably is still a little below a year earlier but with better quality cows, better quality roughage in many sections of the country and continued high feeding rates of concentrates, the rate of milk production per cow probably will continue to increase. Even with no increase in cow numbers for 1956, total production of milk probably will be from 126 to 127 billion pounds. Continuation of present relationships for dairying could well lead to an increase in milk cow numbers by the end of 1956.

Now let us consider what has happened to consumption in the past 2 years. You will recall that support prices for milk and butterfat were reduced on April 1, 1954. It took several months for this reduction to be transferred through to retail levels on all products. Hence, we can get the most clear-cut comparison between consumption before and after the adjustment in support level by comparing calendar year 1955 with calendar year 1953. Consumer incomes reached a record high in 1955, averaging 3 percent greater per person than in 1953. Retail prices for milk and its products, on the other hand, were 5 percent lower on the average in 1955 than in 1953. Despite these two favorable developments, commercial consumption of dairy products as a group, per person, increased only about 1 percent from 1953 to 1955. Per capita consumption of creamery butter from commercial sources increased 7 percent from 1953 to 1955, accompanied by a reduction in retail prices of 10 percent. However, consumption of American cheese showed no change and consumption of fluid milk and cream

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from commercial sources showed only about a one-pound increase. In the aggregate, per capita consumption of dairy products as a group in 1955 will approximate 682 pounds compared with 674 pounds in 1953. The comparatively small increase in per capita consumption of dairy products as a group from 1953 to 1955 suggests that the long-run decline in demand per person for milk and its products has continued, although demand appears to have increased for some items, especially fluid whole milk. The decline has centered mainly on items high in milk fat.

Total commercial use of milk products by civilians in the United States in 1955 will be about 112 billion pounds (milk equivalent) compared with 109 billion in 1954. Other major outlets in 1955 are calf feeding, 3.4 billion; commercial exports and shipments, 1.0 billion; and regular military purchases, 2.3 billion. The increase in population in 1956, with consumption at 1955 per capita rates, would account for an increase of about 2 billion pounds over 1955. In this case the quantity sold to the CCC for price support in 1956 would approximate the 4.6 billion pounds of 1955, compared with 9.1 billion in calendar year 1954.

Purchases of dairy products by the CCC in recent weeks have averaged larger than a year earlier. However, for this marketing year to date, purchases of butter and cheese are substantially smaller than a year earlier, while purchases of nonfat dry milk are equal to those in the preceding marketing year. On the other hand, private stocks of many dairy products, including butter and cheese, have been increased to a greater extent this year than last. Conceivably, a part of these stocks could be offered to the CCC before the close of this marketing year. With broader authority for disposing of its stocks provided by the Agricultural Act of 1954, the rate of disposition of dairy products by CCC has greatly exceeded its purchases in the past year and a half. This stands in sharp contrast to the period from 1952 to mid-1954 when stocks reached record highs. At the present time, uncommited stocks of butter and nonfat dry milk are relatively low but stocks of cheese continue high.

Cash farm receipts from the sale of dairy products increased in 1955 in contrast to a further decline in receipts from farm marketings as a whole. The decline in farmers' receipts from the sale of milk products from a record of 4.6 billion dollars in 1952 to 4.2 billion dollars in 1955 does not indicate the entire decline in receipts from the dairy enterprise. In many instances the decline in price for cattle and calves accounted for as great a decline in cash receipts from the sale of surpluses or cull animals as did the drop in price for dairy products. In the coming year there may be a moderate increase in receipts from the sale of milk and milk products although prices to farmers for milk and butterfat will again be influenced by the level of support yet to be announced for the period beginning April 1, 1956. Net returns from the dairy operation may show another slight increase in 1956, since costs of some items, especially feed, will be lower than they were in much of 1955. Nevertheless, hourly returns to labor engaged in dairy farming will continue low relative to both non-agricultural pursuits and some other types of farming. Over time, if continued, this condition may tend to restrict the rate of milk output but probably will have little influence on 1956 production.

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In the past 2 marketing years, production of milk in the United States has exceeded commercial outlets by 4 to 6 billion pounds, milk equivalent. In coming years, is this difference likely to increase or decrease? First, let us consider prospects for milk production. A number of long-term improvements in dairy farming are being adopted to an increasing extent. As a result, the rate of increase in production per cow may even be accelerated in the next several years. Continued relative improvement for dairy farming in the next 1 to 3 years may result in an upturn in milk cow numbers, also. As a result, a significant annual increase in milk production seems likely in the near future barring sharply subnormal crops and pastures. Further increases may occur in consumer incomes but, as has been observed in recent years, demand for dairy products increases very slowly with an increase in per capita income. It may well be that demand for milk fat in the form of butter and in ice cream and heavy fluid cream may continue to decline, so that we will observe a continued decline in demand for milk products as a group. If this is the case, the total demand for dairy products will increase less rapidly than will the population of the country. With production promising to increase at least as rapidly as the population, there seems no immediate end to the disequilibrium at present support levels.

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THE AGRICULTURAL OUTLOOK

Talk by Frederick V. Waugh, Director
Agricultural Economics Division
at the 33rd Annual Agricultural Conference
Washington, D. C., November 28, 1955

When we met a year ago, we expected business conditions to continue to improve. But we expected some drop in farm income, with agricultural prices in 1955 averaging no higher than those prevailing in the fall of 1954.

We were right in direction, but we underestimated the size of the changes. Actually, we have experienced a business boom. Employment, industrial production, and the gross national product are all somewhat greater than we anticipated. Actually, we have experienced a sharper drop in agricultural prices and farm income than we expected. Prices of farm products fell about 5 percent from 1954 to 1955. Realized net farm income fell 10 percent.

Looking ahead to 1956, we again expect business conditions to be very good. We again expect agricultural prices and incomes to lag behind.

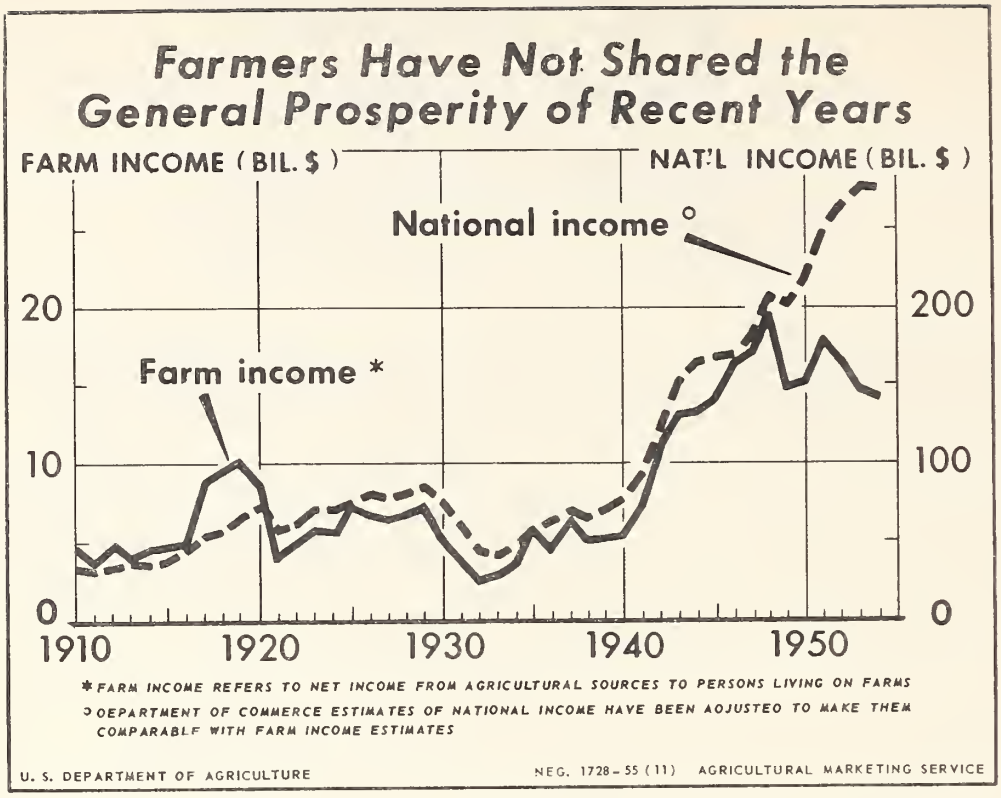
If the expansion in hog production will come to a halt some time next year, livestock producers may get about the same incomes in 1956 as in 1955. But we expect further declines in the prices of major crops and in the incomes of farmers producing these crops. With average weather, total crop output is likely to be high again. There will likely be no significant reductions in carryover stocks. Present legislation permits lower levels of price supports for some major crops.

This would indicate a further drop in cash receipts from farm marketings. Production costs are not likely to go down much--considerably lower feed costs being largely offset by higher costs of manufactured goods. Marketing charges, too, are likely to average higher in 1956 than in 1955.

In other words, we expect the "cost-price squeeze" to continue in 1956. We expect some further drop in net farm incomes. We have never been able to forecast the exact amount of change in farm income. I shall not attempt it now. My own feeling, based on discussions with our economists and statisticians, is that the drop from 1955 to 1956 will be less than that from 1954 to 1955.

This leaves out of account any changes in farm programs that may be made in the coming session of the Congress. Such changes could affect the long-term outlook very substantially. But I doubt if they would affect the 1956 outlook very decisively. No adjustments in the farm programs are likely to make an immediate change in the basic economic facts confronting the farmer. It took several years for American agriculture to get into its present troubles. Economists and statesmen can help to get it out, but it will take time to do it.

To understand the agricultural outlook we must, of course, study the basic economic facts, including current and foreseeable trends. My talk today will be a brief discussion of 15 charts.



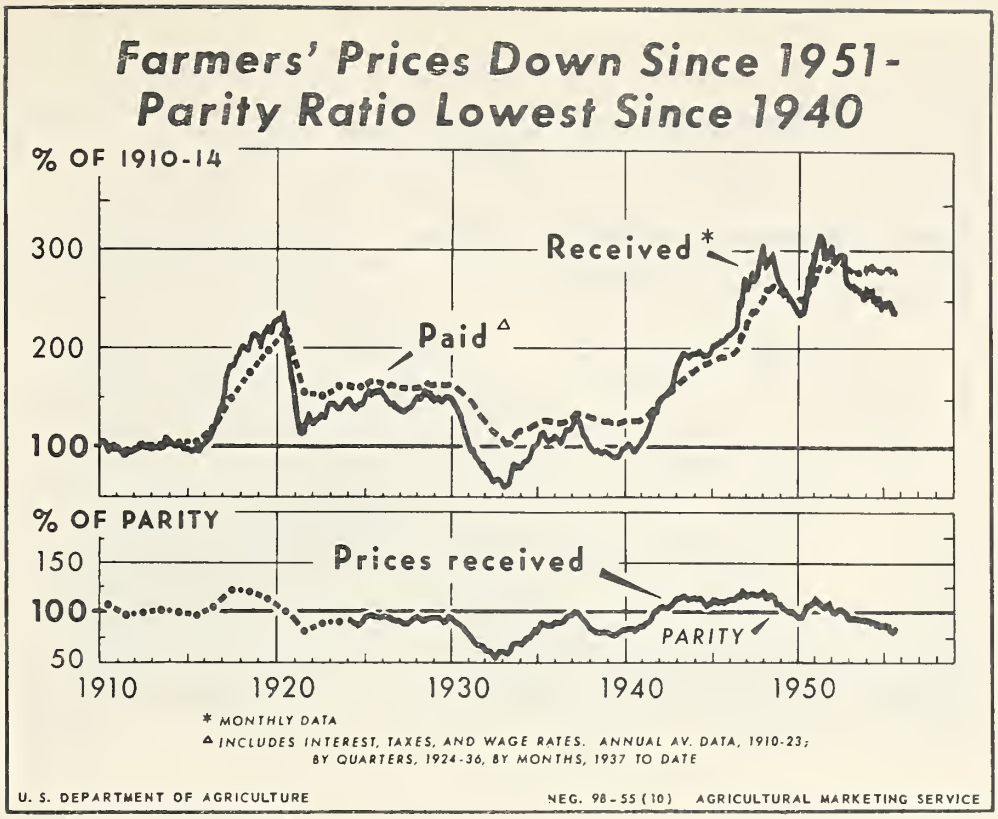
Agricultural economists have long recognized that there is usually a high correlation between changes in national income and changes in farm income. The first chart shows this fact very clearly for most of the period from 1910 to date. In general, farm income has gone up whenever national income has risen. In general, farm income has dropped when national income has fallen.

Since 1910 there have been two periods in which the relation between farm income and national income was unusual. The first was the World War I period from 1917 through 1920. In this period farm income rose much more than did national income. This was the result of a huge and unexpected foreign demand for some of our principal farm products.

Aside from World War I, the only other period where the relationship looks decidedly unusual is that of recent years, especially since 1951. Since 1951, national income has risen very substantially. During this same period the trend in farm income has been definitely downward. In other words, the farmer has not shared in the general increase in prosperity in recent years. This has probably been due mainly to three factors. First, very high rates of agricultural production and large carryovers of farm products; second, a considerable drop in agricultural exports from 1951 to 1952; and, third, inflexibility of costs of production and marketing which failed to go down when farm income was falling.

I shall return to this chart at the end of my talk and shall discuss briefly some of its main economic implications to agriculture and to the rest of the economy.

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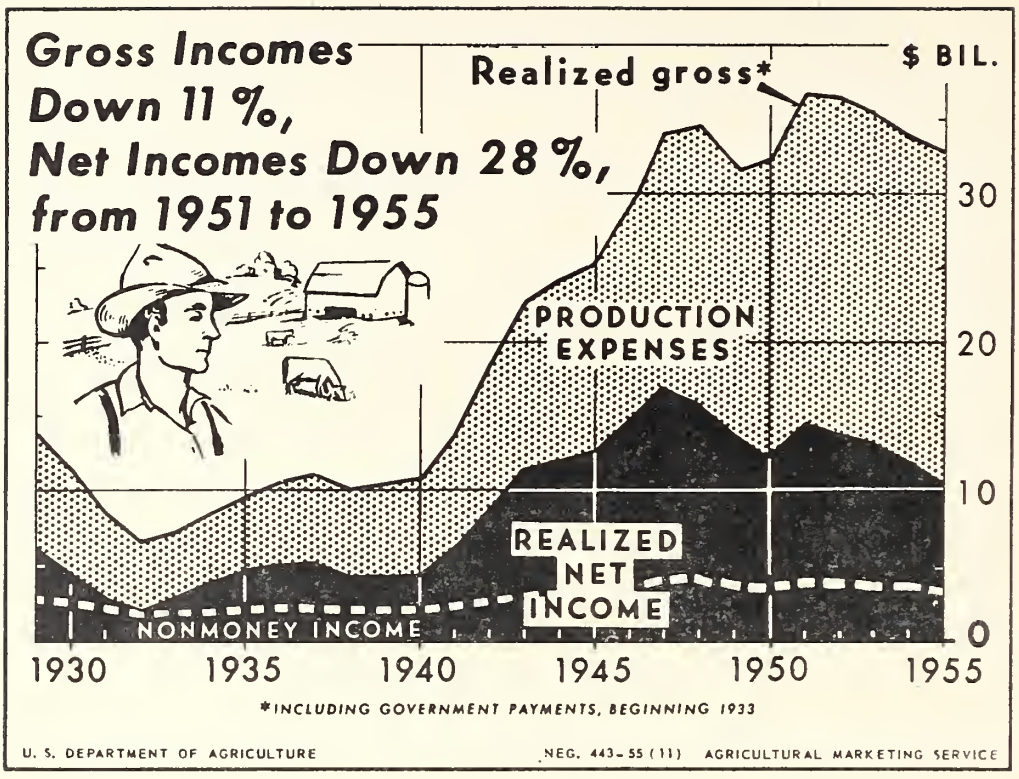


Prices received by farmers in mid-October averaged 5 percent below those of a year earlier. On the other hand, prices paid by farmers, including interest, taxes, and farm wage rates in mid-October were almost the same as in October 1954. The October parity ratio was 5 percent below that of a year earlier and the lowest since World War II began.

The parity ratio is simply the ratio between the two lines on the top part of the chart. It reached a high of 123 in October 1946. The post-Korean peak was 113 in February 1951. Since that time the parity ratio has fallen rather steadily, reaching a low of 82 in October 1955.

A year ago I said that a parity ratio between 85 to 95 would not be out of line with the ratios realized in peacetime years of high employment in the past. However, the October 1955 parity ratio of 82 is lower than we should expect in a time of general economic boom.

Looking ahead to next year we expect some further decline in the index of prices received by farmers, but not much different from the lows being reached this fall. This is mainly due to expected lower average prices of major crops in 1956. Prices of livestock and livestock products may average close to those of this year, especially if the increase in hog production comes to a halt. Beef cattle prices may improve somewhat. Milk prices should average about the same as in 1955. Prices of hogs and of poultry products may average a little lower. In the case of major crops, we now have very large supplies, including heavy carryovers. With normal weather we can expect large crops again next year. Price supports of some major crops can be reduced under present legislation. Presumably support levels for some of these crops will be lowered.

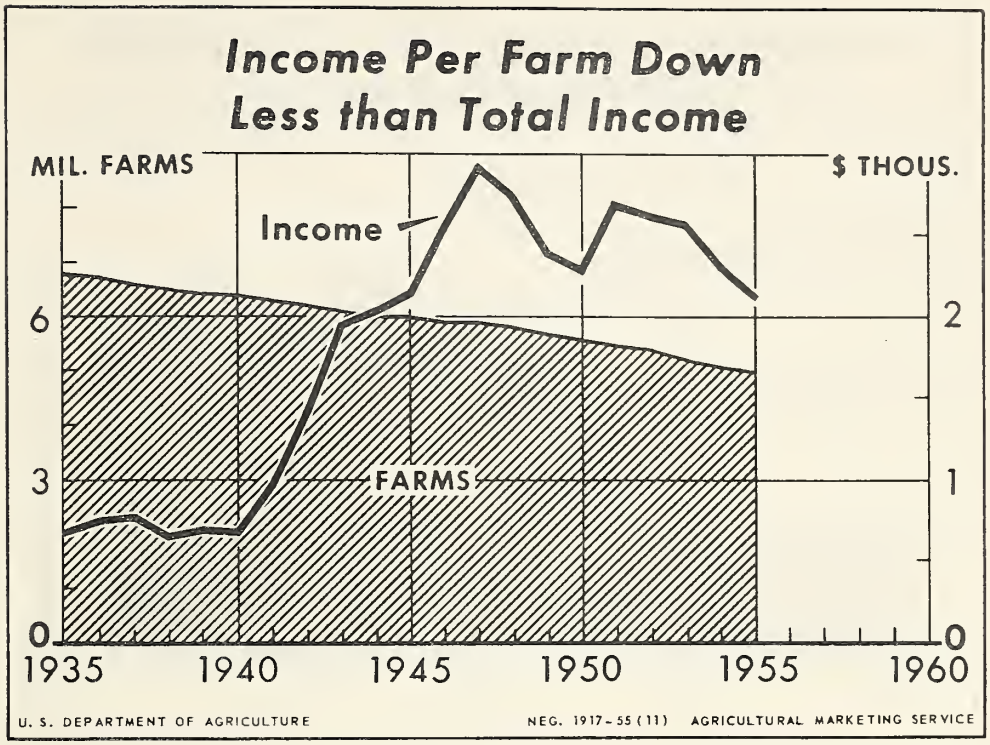


From the end of World War II to 1948 there was a steady increase in gross farm income. But in 1949 gross income dropped 3 billion dollars. This was the largest drop in any postwar year. It doubtless resulted in part from the moderate business recession of 1949. Then came Korea and a sharp increase of about 5 billion dollars in gross income from 1950 to 1951. Since 1951 the trend has been down. It has lost most of the Korean bulge, but it is still slightly above the 1950 level. We expect some further decline in gross income in 1956. This is due mainly to expected drop in prices of crops. To some extent it also reflects the effects of tightening acreage allotments and marketing quotas.

Although the peak in gross farm income occurred in 1951, the peak in realized net income was in 1947. Net farm income dropped substantially from the peak of 1947 to a temporary low in 1950. There was a gain of some 2 billion dollars in 1951, when farm prices reached their all-time high. Since then there has been another drop amounting to over 4 billion dollars.

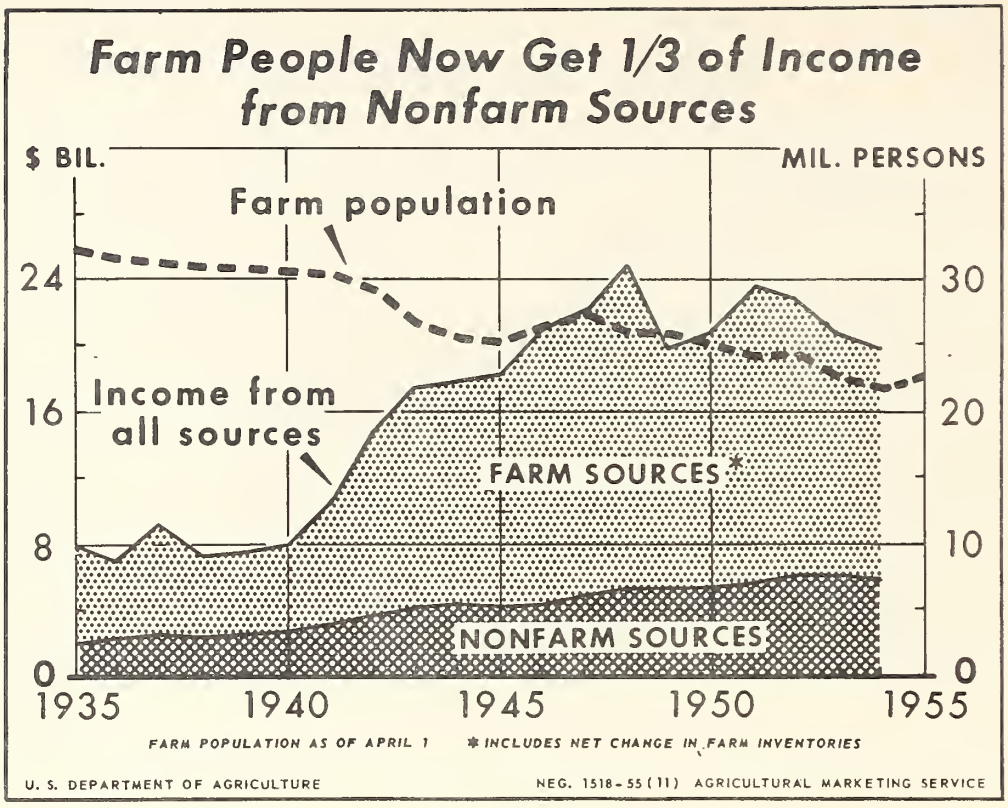
There may well be a slight drop in production expenses due almost entirely to lower prices of feed and other items originating in agriculture. But we expect some further decline in realized net farm income in 1956.

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While the realized net income of agriculture as a whole dropped almost 30 percent since 1951, the number of farms dropped about 10 percent so that realized net income per farm is down about 20 percent. On a per farm basis, net income in 1955 was not much under that of 1950. In terms of constant purchasing power, however, the per farm income this year is appreciably less than in 1950.

Our estimates of farm income, whether on an aggregate basis, a per farm basis, or per capita basis, are often criticized because they include a large number of noncommercial farmers who have very low incomes. The average income of commercial farms, is of course, above the average income for all farms. But the difference should not be over-emphasized. Just to gain some perspective, assume for the moment that the three million commercial farmers received the entire 10.6 billion dollars of realized net income of all farmers in 1955, (obviously an overstatement). This works out to about $3,500 per farm. Does this seem like an exceptionally high income compared with the incomes of about $4,000 a year now being earned by factory workers? Remember that the commercial farmer has high investments. Also, that farming today requires a high level of technical and managerial competence comparable to that of the most highly skilled workers.

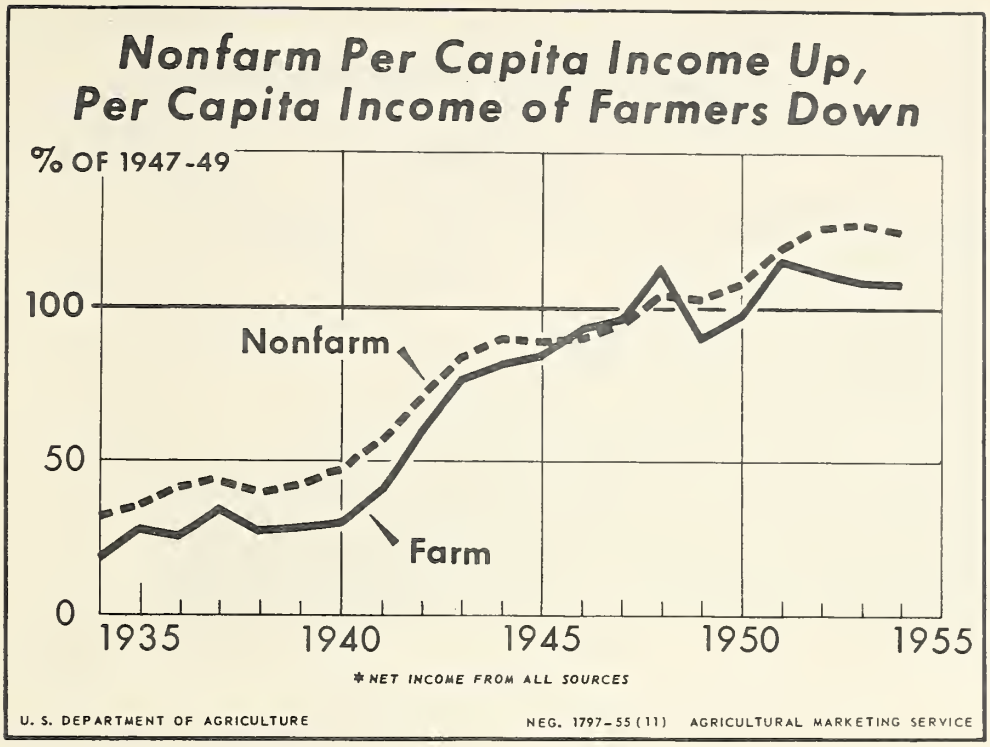


So far we have talked about gross and net income from agricultural sources. This chart shows our estimates of farmers' incomes from all sources, nonfarm as well as farm. It also shows the downward trend of the farm population.

Farm people are now getting about a third of their income from nonfarm sources. For this reason their total income has not varied so much as has their income from farm sources alone. Their income from nonfarm sources has held fairly stable during recent years, while their income from farm sources has fallen.

The farm population in 1955 is about 12 percent smaller than that of 1950. Even though farm population is smaller than in 1951, it has not dropped so much as has the farmer's income from all sources. This will be seen more clearly in the following chart.

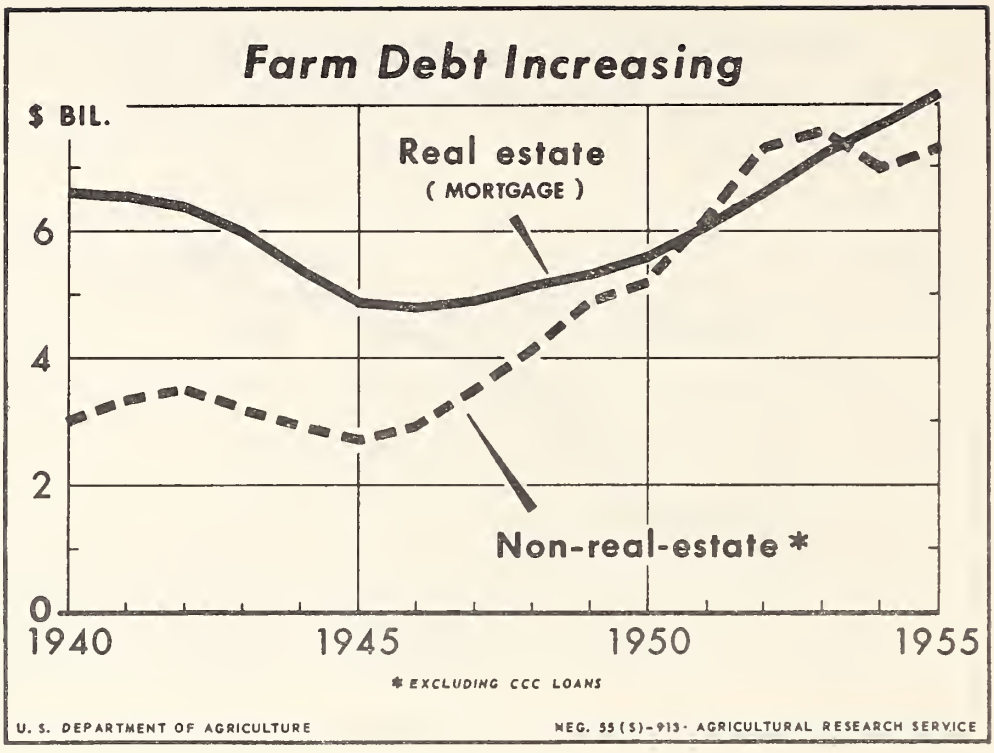
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When we show the per capita incomes of farmers and the per capita incomes of nonfarmers on the same chart we often get into an argument about the difference in level between the two figures. Note that this chart does not show the number of dollars received by farmers and nonfarmers. Rather, it shows index numbers with the base period 1947-49=100.

Most of the time since 1934 there has been a high correlation between changes in per capita farm income and per capita nonfarm income. Note that from 1934 through 1948 per capita farm incomes rose more than did per capita incomes of persons not on farms.

Since 1951, however, the per capita incomes of farmers has been trending downward, while the per capita income on nonfarmers has been trending upward. Between 1951 and 1954, the per capita income of farm people dropped 7 percent, while the per capita income of nonfarm people went up 5 percent. The figures in 1955 are not all in yet. However, it looks as though per capita incomes of persons on farms declined further from 1954 to 1955, while the per capita incomes of persons not on farms continued to rise as a result of the business boom and rising wages.



Total farm debt dropped from 9.9 billion dollars in 1942 to 7.6 billion dollars in 1945. Since 1945 it has been steadily increasing, reaching a total of 15.5 billion dollars in 1955. Both real estate mortgage debt and other farm debts have been increasing.

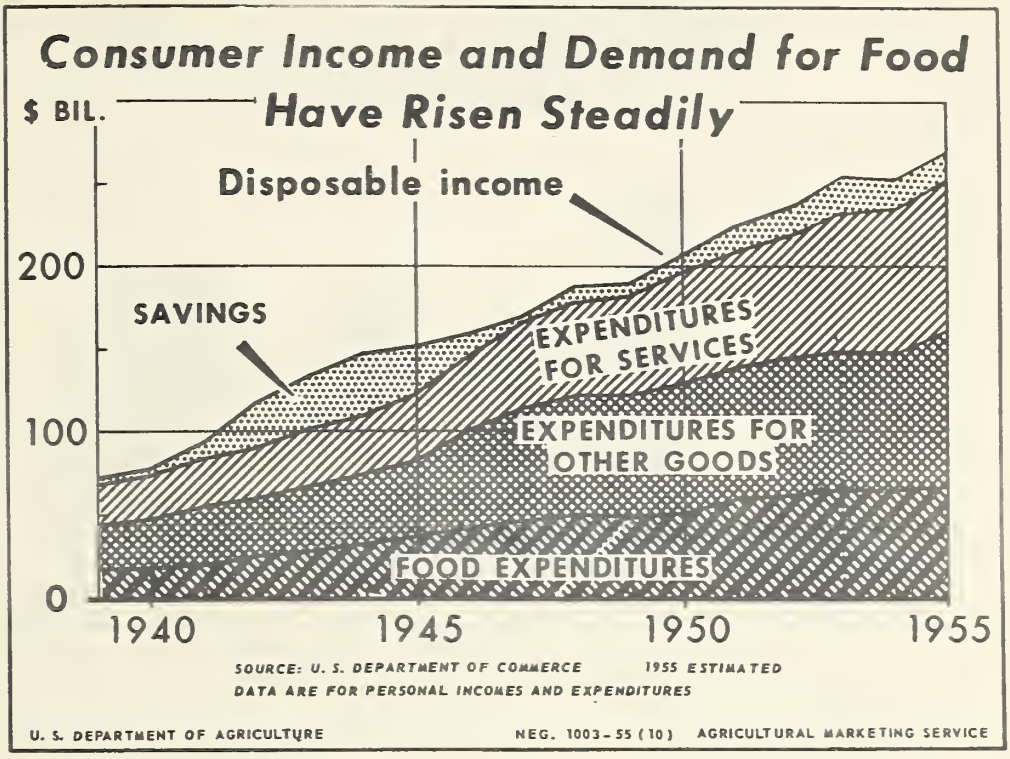
Of course, these figures do not indicate by any means that the average farmer is approaching bankruptcy. The total value of farm assets is much higher than total farm debt. In spite of the recent trends in debt, the farm financial situation is very good compared with the prewar situation.

The well-being of farmers is not measured entirely by income nor by debt. There are at least two indexes which show a more optimistic picture.

First, land values have held steady in recent years while farm incomes were dropping. In fact, average value of farm land per acre on July 1, 1955 was 5 percent higher than a year earlier.

Second, the level-of-living index shows a continuous improvement, indicating that farmers are getting more of the good things of life such as automobiles, radios, electricity, and telephones.

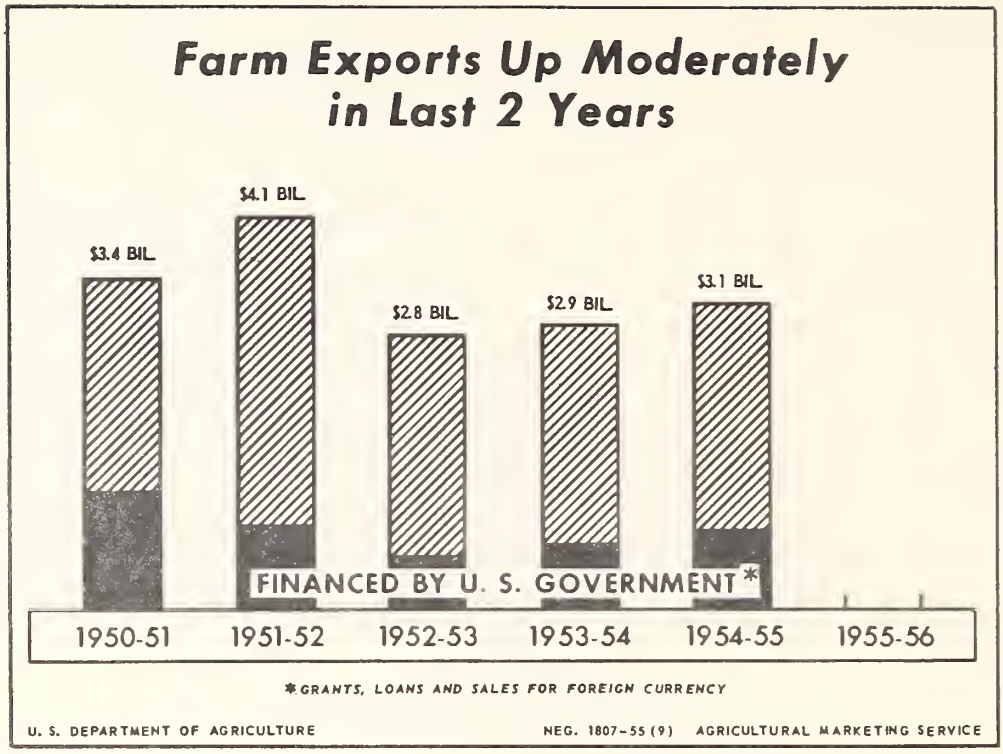
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Since 1939 there has been a remarkable increase in disposable income of consumers. The per capita purchasing power of the average consumer has increased very substantially, although part of their increase in dollar income has been dissipated by higher prices.

High consumer income has resulted in a strong demand for food. Consumers have been spending year by year about a fourth of their disposable income for food. Their food expenditures have gone up in proportion to their disposable income. The demand for food at retail has been strong, is strong now, and is expected to be strong in 1955.

We must remember, however, that these figures on food expenditures are in terms of retail prices. The increase in food expenditures has not all been reflected in farm incomes. We shall discuss this further in connection with Chart 14.

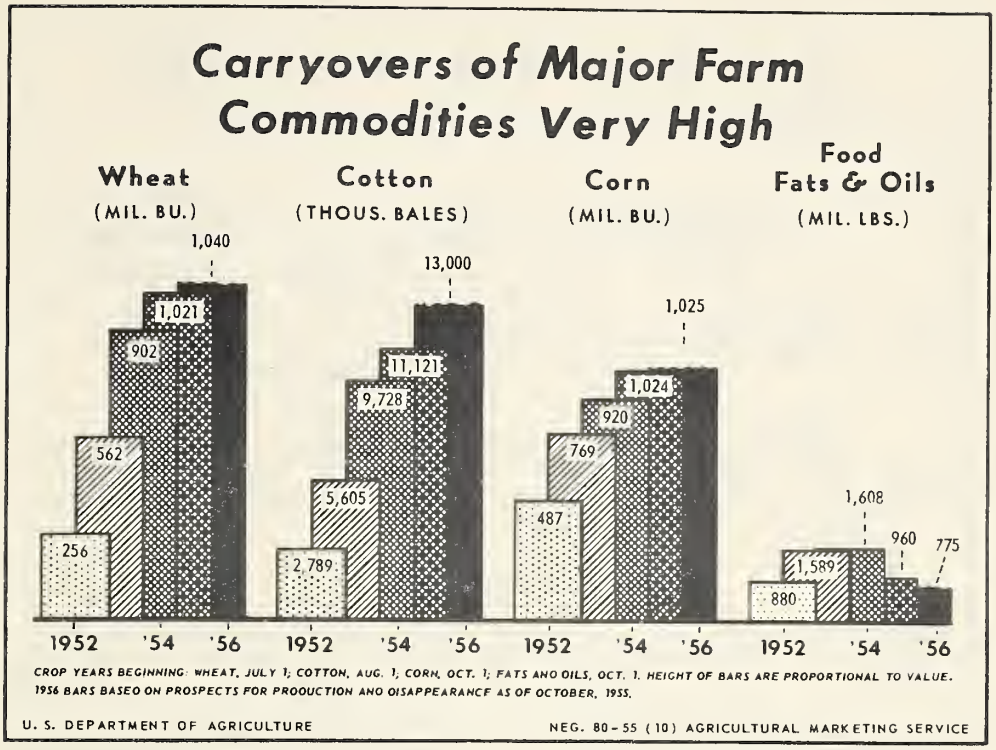


Not only has the domestic demand for food been high since the war, the demand for exports has been high, too. Farm income has been maintained partly by high commercial exports and partly by exports that were financed by the Government.

The export demand has not been nearly so stable as the domestic demand. The value of farm exports dropped almost one-third from the crop year 1951-52 to the crop year 1952-53. Since that time the value of exports has increased moderately.

In 1955-56, we expect the volume of our agricultural exports to be maintained at about the levels reached in 1954-55. Business is good in most foreign countries, and the demand for agricultural products is strong. But foreign supplies of farm products are increasing. Competition in foreign markets is active. We can maintain our farm exports only by vigorous Government programs.

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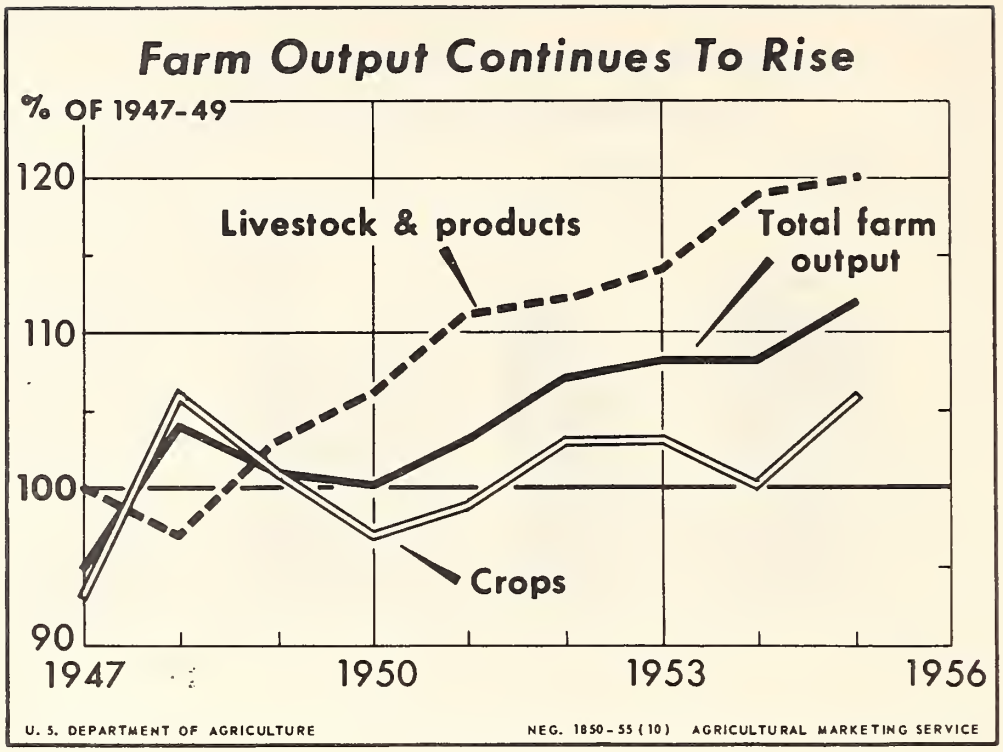


The carryover stocks of wheat, cotton, and corn have been increasing very rapidly during the past three years. The chart also shows rough estimates of probable carryover stocks of these commodities in the middle of 1956. Please note that we have not had time to bring this chart up to date in order to reflect the recently-increased estimate of 1955 cotton production. Present indications are that by mid-1956, the carryover of cotton will be increased significantly, that the wheat carryover will be up slightly, and that the corn carryover will be about the same as it was this year. Again, most stocks will be held by the CCC.

Comparing the carryovers at the middle of 1952 with those in the middle of 1955, we see that wheat had increased almost 4 times, cotton almost 4 times, and corn about $2\frac{1}{2}$ times.

On the other hand, the carryover of food fats and oils dropped about 40 percent from 1954 to 1955, largely as the result of heavy exports. A further decrease is expected by the end of the present crop year.

Large carryover stocks of major farm commodities is one of the most difficult aspects of the farm outlook. The rapid growth in carryover stocks during the past few years is an indication that we have not brought our production and consumption into balance. We obviously must find some way of further reducing production of some major commodities or else stimulating greater consumption of them.

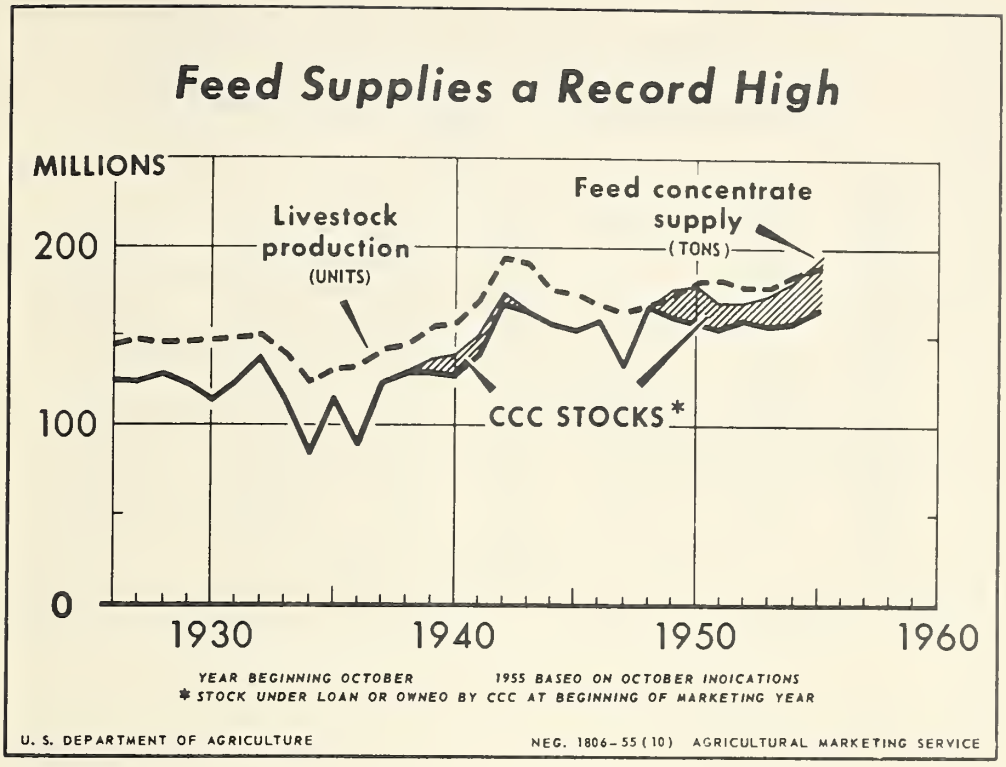


The total output of farm products has continued to grow since the war. This has occurred while the farm population has been steadily dropping. It is a tribute to the increasing efficiency of farmers. But it also confronts agriculture with serious problems.

The chart shows that total farm output has increased rather steadily since 1950, reaching a record high level in 1955. The trend in the output of crops has been somewhat uneven, and the increase in crop output has been much less than the increase in the output of livestock and livestock products.

Looking ahead to 1956, we can expect continued high agricultural output. With good weather, total output might well equal that of 1955.

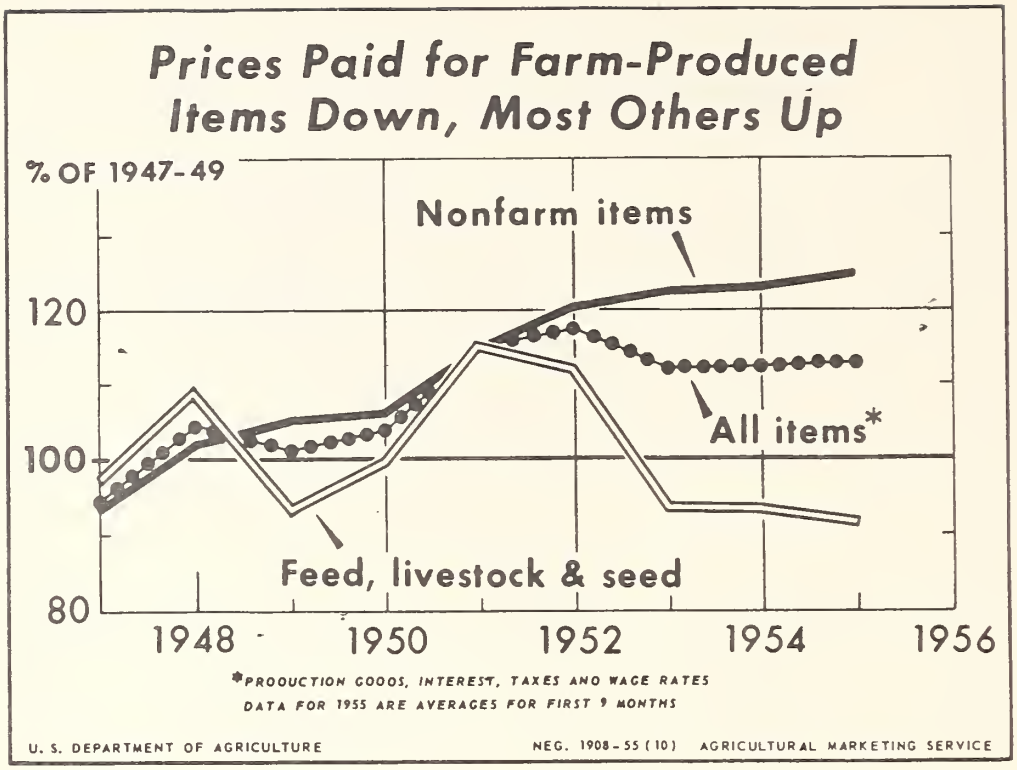
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Feed supplies are extremely high this year and feed prices are relatively low. The present feed supplies per animal unit are a record high.

This situation encourages high rates of feeding. It is likely to mean higher milk production per cow and increased egg production per hen.

Also, plentiful supplies of feed tend to encourage increases in the number of animals bred and raised on farms. In 1956, however, we do not look for any substantial increase in the numbers of farm animals, mainly because we seem to be near the top of the cattle production cycle.

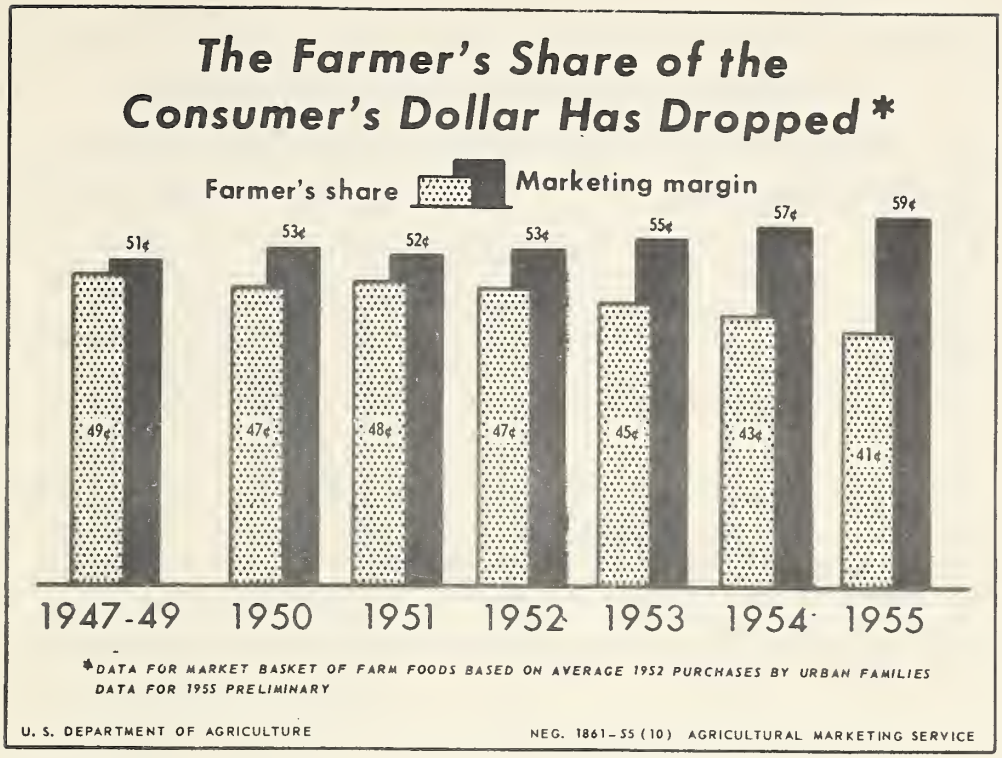


We have discussed the situation concerning farm income, demand and supply. We next turn briefly to two charts concerning trends in cost.

The index of prices paid by farmers for production items dropped noticeably from 1952 to 1953 and since has remained about steady. This index, however, is an average of two divergent trends. Prices paid for feed, livestock and seed have dropped substantially. These are things one farmer buys from another farmer. However, at the same time the prices of nonfarm items have continued to creep upward.

The prospects are that prices of feed, livestock and seed will remain low in 1956 and the prices of nonfarm items will continue to creep upward. The general level of prices paid by farmers next year is not likely to be greatly different than that of this year.

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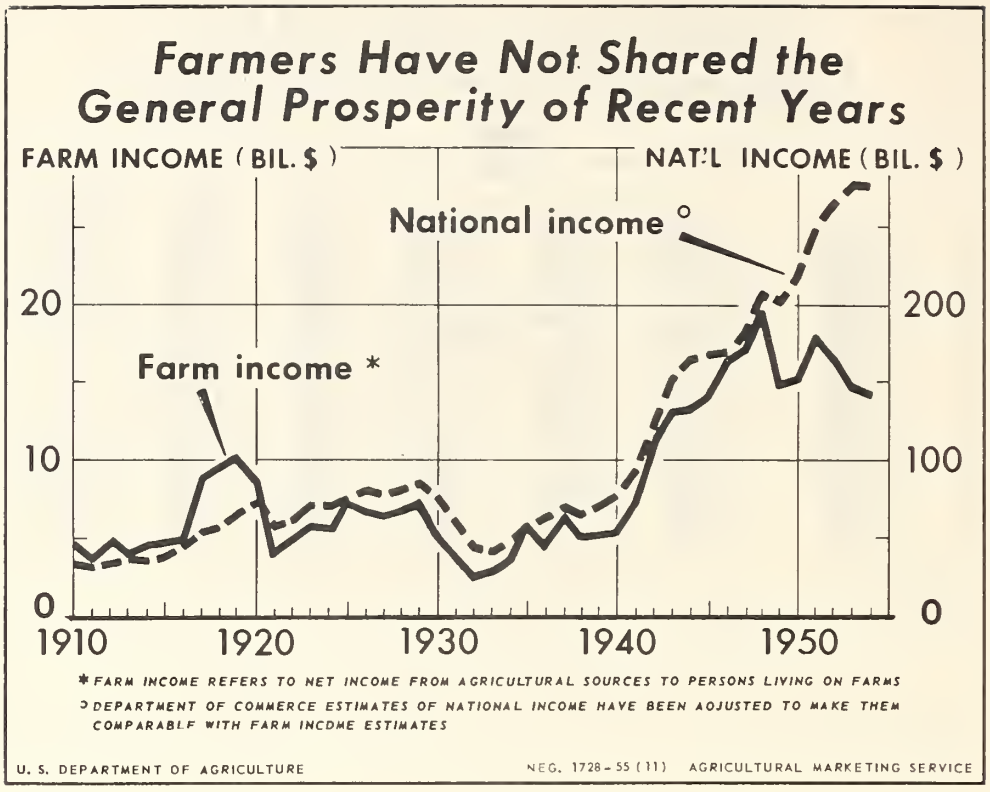
Not only have the costs of farm production been increasing, the costs of marketing food have been increasing, too.

In the past few years retail prices of food have declined very little in spite of a sharp drop in prices at the farm. In other words, there has been a widening of the gap between prices at the farm and prices in city retail stores.

In connection with the chart on consumer disposable income, we mentioned that the demand for food continues to be very strong in terms of retail prices. A substantial part of consumer food expenditures, however, was absorbed by marketing, including processing, packaging, transporting, storing, wholesaling, and retailing.

The lower share of the dollar going to the farmer, shown in this chart, is not, primarily at least, a reflection of increased services. These data are based upon the so-called "market basket of farm foods." The same foods are priced from year to year, so far as it is possible to do so.

The increased marketing margin is primarily due to higher wages. There are some other factors, especially increased freight rates. These factors, too, are related to the trend in wages.



At this point I would like to turn back to Chart 1. We have already pointed out that farmers have not shared the increasing prosperity of recent years.

There are two main schools of thought concerning the relation between national income and farm income. Some people argue that a rise in national income causes a rise in farm income. Some others contend that a rise in farm income causes an increase in national income. Neither theory seems to be supported by the trends of the past few years. Farm income has been dropping, while national income has been rising.

The chart shows clearly that there has been a very high correlation between farm income and national income during most of the period from 1910 to date. The only major exceptions are the period of World War I and the period since 1948. For those who support the 7-to-1 theory, I would like to point out that during most of this period national income was about 12 times as great as net income from agricultural sources to persons living on farms. This might support a 12-to-1 theory rather than a 7-to-1 theory. Thus, one might argue that each dollar added to farm income generated a $12 increase in national income rather than a $7 increase. If he wanted a larger multiplier, he might take 1954, the last year on the chart, when national income was almost 20 times as great as farm income. Thus, he might get a multiplier of 20 instead of 12 or 7.

Personally, I am doubtful about any simple multiplier theory, whether the multiplier be 7, 12, or 20. But I do believe that in the long run agricultural incomes must be kept in fairly good balance with national income if we are to maintain a healthy growth in our total economy.

The drop in farm incomes during the past few years obviously has not brought about anything approaching a business recession. This is because farmers have so far maintained their expenditures at very high levels. They have continued to buy farm machinery, equipment, and the other things they need. However, more and more things are being bought on time, and farmers' debt is increasing. If farm income should continue to drop, or even to stay at present levels for several years, farm expenditures would doubtless drop, too. This would cause a reduction in employment and production in those industries serving farmers. Indirectly this would affect many other basic industries. In time, it could lead to weakness throughout the economy.

Almost everyone agrees that farm incomes are now too low. But this does not mean that farmers need, or are likely to get, 1/7 or even 1/12 of the national income in future years. With continued declines in the proportion of persons in agriculture, and continued growth in the manufacturing and service industries, it is only natural that the proportion of income going to farmers should decline. Probably in the future, net realized farm income will average less than 1/12 of national income.

In 1956, we expect a further rise in national income--but a further drop in farm income. This is an abnormal situation. If continued much longer it would lead to an unhealthy lack of balance in the American economy. But these abnormal trends are not likely to continue much longer. In most of the future, as in most of the past, farm income and national incomes are likely to move in the same direction. Farm prosperity and general prosperity still depend upon one another.

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THE OUTLOOK FOR WHEAT IN 1956

Statement presented by Robert E. Post at the
33rd Annual Agricultural Outlook Conference,
Washington, D.C., November 30, 1955

The story on wheat in brief is that we have a lot of it, that while we have cut production in the past 2 years, a reduction in carryover is not expected before July 1, 1957. Further, such reductions as appear likely in any year will not be sufficient to reduce supplies very much, and we can look forward to large supplies of wheat for many years. However, even though supplies are large, wheat prices have shown considerable strength as a result of the support programs.

I have 3 charts which I will use to bring us up to date. This first chart (650) shows seeded acreage of wheat climbing from 53 million acres in 1942 to 84 million in 1949, and then fluctuating at high levels until 1954, when it was reduced to 62 million acres and a year later to 57 million acres by acreage allotments and marketing quotas. The reduction in acreage resulted in much smaller crops in 1954 and 1955.

This next chart (1016 A) shows the distribution of total wheat supplies. Back on June 30, 1952, our old-crop stocks amounted to 256 million bushels, only a moderate carryover. Last June 30, only 3 years later, they were 1,021 million bushels, about 4 times as large.

The sharp increase in stocks set the stage for the reimposition of acreage allotments and marketing quotas for the 1954 and 1955 crops. In 1954 the acreage allotment could not go below the minimum for that year of 62 million acres. The allotment for the 1955 crop was set at 55 million acres, but this was on the basis of harvested acreage, which permitted some increase in yields resulting from harvesting the more productive land. In the absence of the minimum, the allotment for the 1955 crop would have dropped to about 19 million acres.

The quantities used in the United States, after declining in the post war years seem to have about stabilized. Such reduction as we have had is largely in feed use. Food use remains about unchanged, with declining per capita consumption about offset by increasing population. Less seed is needed on the reduced acreage.

Exports have varied greatly, especially in the postwar period shown on the chart. They were very large immediately following the war, reaching a peak of 505 million bushels in 1948-49. Last year they were 274 million bushels.

Agriculture - Washington

Now let us look at the situation as it exists in the current 1955-56 year. Total wheat supplies are estimated at about 1,941 million bushels, consisting of a carryover of 1,021 million, a crop estimated at 916 million, and an allowance for imports of 4 million bushels, mostly of feeding quality wheat from Canada. This indicated total supply consitutes a new all-time high, exceeding the previous record of 1,876 million bushels a year earlier by about 3 percent.

Domestic disappearance in 1955-56 is indicated at about 625 million bushels, which would leave about 1,315 million bushels for export during the marketing year and carryover at the end of the year. Exports July 1 through November 18 are estimated at 88 million bushels, slightly above the 76.8 million for the same period a year ago. If exports for the marketing year total about the same as the 274 million bushels in 1954-55, the carryover June 30, 1956 would total about 1,040 million bushels. This would be slightly above the record on June 30, 1955, but would represent the smallest annual increase since June 30, 1952.

Now the outlook for 1956-57. Assuming that the acreage seeded for the production of grain for the 1956 crop will be 55.5 million acres, on the basis of a 55 million-acre allotment, and a yield per acre of about 15.5 bushels (which is slightly above the 1945-54 average of 15.3 bushels), a crop of about 860 million bushels would be produced. Domestic disappearance in 1956-57 is expected to total about the same as the 625 million bushels estimated for 1955-56. Exports cannot be forecast at this time. If they total about the same as the 274 million bushels last year, total disappearance would amount to about 900 million bushels, or about 40 million bushels more than an 860-million-bushel crop. This would afford a little reduction in carryover by June 30, 1957.

Over the longer pull, with little change in domestic distribution expected in the next several years, we will continue to be dependent upon maintaining exports at a relatively high level. With world wheat production increasing, it may be difficult for the United States to maintain the present level of wheat exports. Even if we could maintain exports at this level, the production from a minimum allotment of 55 million acres would, with average weather conditions, result in an annual production almost equal to total disappearance. This, of course, would permit only a very slow reduction in our carryover stocks.

Now let us turn to prices. This chart (836) shows wheat prices and loan rates at Kansas City. The loan program started in 1938, with an average loan rate of 59 cents, which was at the rate of 52 percent of parity. These rates have climbed steadily over the years, reaching a high of $2.24 for the 1954 crop. This change was due to an increase both in the parity index and in the percentage of parity. For the 1955 crop they were reduced to $2.08 which reflected a reduction from 90 percent to 82½ percent of parity.

This chart also shows that wheat prices have averaged around or near the effective loan level for the marketing year, except for two years. In 1946-47 and 1947-48 demand was exceptionally strong and prices were substantially above the support level. In 15 of the last 16 marketing years, the monthly average cash hard winter wheat price was lowest of the year in June, July, or August. The low to date this year was in August. However, prices next June will be reflecting the sharply lower loan rates for the 1956 crop. In 10 of the last 16 years, the price averaged highest in March or later. In other years, the high occurred in December-February, except in 1952 when the price average highest in November.

This year wheat prices have been closer to the loan levels than they usually are in the first part of the season. The strength in prices in face of the largest supply in our history is due to the large quantities of old-crop wheat held in CCC inventories and to the reduced 1955 production, leaving relatively small supplies in commercial channels. The level of prices in the last half of the marketing year will depend upon the quantity of wheat which farmers place under support between now and next January 31. The quantity of wheat placed under support through October 15 totaled 180 million bushels, which was much less than the 302 million bushels from the larger 1954 crop under support on the same date a year earlier. The price of hard red winter and hard red spring wheats of the better protein tests have been generally above loan rates, and sizable quantities of free supplies of hard red spring and hard red winter are limiting factors to seasonal advances in prices of these quality wheats from present levels. With prices of ordinary protein hard red winter wheat generally still considerably below the support rate there will be a tendency for substantial quantities of this wheat to continue to go under support. Soft red winter wheat prices are even farther below the loan, which is conducive to continued movement under support. If large quantities of soft red winter are put under price support, prices of such wheat may advance from current levels. If the price of soft white wheat continues below the loan, large quantities of this type of wheat will go under the price support programs, which will tend to be a price-supporting factor.

The national average support price for the 1956 crop will be not less than $1.81 per bushel. The full support level will be available in the 36 commercial wheat States for producers who comply with their individual farm acreage allotments. Support rates in the 12 noncommercial wheat States are set by law at levels representing 75 percent of the rates calculated on the national average. In the noncommercial States, acreage allotments and marketing quotas will not apply. A discount of 20 cents per bushel in 1956 price-support rates for 24 wheat varieties disignated as undesirable because of inferior milling or baking qualities has been announced. This change in the wheat price-support program for 1956 is designed to encourage shifts to the more desirable wheat varities from planting of wheat with inferior milling or baking qualities.

As I stated at the beginning, the situation and outlook boils down to our having a lot of wheat and the likelihood that we will continue to have a lot.

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THE LONGER-TERM PRODUCTION OUTLOOK

Talk by Sherman E. Johnson, Director, Farm and Land Management Research, Agricultural Research Service, U. S. Department of Agriculture, at the 33rd Annual Agricultural Outlook Conference, Washington, D. C., November 29, 1955

The Outlook Approach in Farm and Home Development Work

I assume we all agree that outlook information is designed to guide farmers in their production and marketing decisions. Those decisions have different time spans. Some are of relatively short duration; for example, the question of whether to market hogs at light weights or feed them out to heavier weights. On the other hand, the question of how many sows to breed for spring or fall farrow, covers a production cycle of nearly a year, as do most decisions concerning annual crops. When a farmer makes a decision as to whether to go into or out of beef or dairy production, he is concerned with farm planning over a longer time span. But the effect of such a decision is of shorter duration than the one confronting the young man who is considering farming as a career. Such a decision covers a farming generation, and when a young farmer decides to buy a farm, he may also make a commitment that covers most of his active years on the farm.

As I recall the request for this part of the outlook program, it was in terms of providing an outlook framework for farm and home development work. In that activity you are called upon to provide outlook information for a longer time span than the year ahead. You are working with farmers in helping them to develop the most profitable systems of farming for their special situations over a period of years. This requires looking ahead for at least 4 to 5 years and sometimes much longer. But perhaps 4 to 5 years ahead, or what we might call the middle term outlook, is of most importance. It is also necessary to recognize that farmers start with their present farming systems and their current financial and family situations.

Because changes are likely to require extra time, money, and management, the roughest part of the road to be travelled will be the period of transition from the present farming system to the potentially more profitable one. Frequently, net income actually declines while the change-over is in process.

Although the middle term outlook is the most important in the farm and home development setting, it is also necessary to have in mind the longer term prospects, partly because a longer look ahead might indicate the desirable directions of adjustment that should be carried out in the next 4 to 5 years. At the present time, for example, we need to consider the most rapid growing points in the market for farm products, and try to determine what adjustments in farm production would achieve a better balance in relation to markets, say, 10 years from now.

There are at least five principal factors to consider in the outlook approach to farm and home development: (1) Market prospects, (2) the supply prospects in relation to prospective markets, (3) the farm programs in prospect, (4) the local production and marketing situation, and (5) the individual farm and family situation.

The middle and longer term market prospects have already been discussed by Mr. Wells and Mr. Cavin. Apparently, we can be more optimistic about the market outlook over the longer term than for the 4 or 5 years immediately ahead of us. But even for the middle term , they look for improvement in meat animals and in some of the fruits and vegetables. I also get the impression from the "Livestock and Meat Situation" that roughage consuming meat animals are likely to be in a relatively favorable position.

For a real "bright spot" in the market outlook from 1956 to 1960, however, we have to turn to timber. This product is a relative newcomer in our outlook discussions. But I suggest that we give it a more prominent place in the outlook programs. Those who have timber stands which can be harvested on a sustained yield basis are relatively fortunate. The longer term timber outlook indicates that we should undertake studies to determine whether some of the land now in crops might return a larger income over the longer term if planted to trees. Unfortunately, the long waiting period tends to retard such adjustments even when a long term income advantage seems apparent.

If my interpretation is correct, market prospects for products other than timber can be summarized as follows: Under favorable conditions we can expect a 9 to 10 percent increase in demand for farm products during the next 5 years. This is likely to have the greatest impact on the market for meat and other livestock products. If we look ahead for some 20 years, the market for farm products may increase about 40 percent from the level of the past 2 years. Again, the market expansion is likely to favor livestock, especially the roughage consuming animals.

When we turn to the production side of the picture, we also need to distinguish between the middle term and the longer term outlook. If we begin with the longer look ahead, a 40 percent increase in the market seems like a large order to fill in the next 20 years. But under peacetime conditions, I see no reason for worry about the ability of farmers to supply all the farm products that the market will take at profitable prices. For one thing, 1955 production is running much higher than utilization, even at present prices. The needed increase in output from present levels is closer to 30 percent rather than the 40 percent market projection. Barring unforeseen emergencies, and considering the potential capacity of the farm plant as well as the technical advances in prospect over the next 20 years, the question of "food enough" is not likely to arise. The principal question is much more likely to be how to produce the needed products efficiently, and with returns to farmers comparable with other sectors of the economy.

Market expansion, however, should provide an opportunity for achieving a better balance between production and markets than we now enjoy. But farmers have to survive the next few years in order to benefit from the more favorable long term prospects. And unless serious drought or international emergency intervenes, or unless new foreign markets are opened up, aggregate food and fiber supplies will continue to press heavily on available markets for the next 4 to 5 years. We are producing nearly enough now for the projected normal market of 1960. Farm output in 1955 is about 48 percent above the average of the years 1935-39 and 12 percent above 1947-49.

We are also badly unbalanced in production. We need to recognize that our farm plant is geared up to produce for war emergency and rehabilitation needs; that farmers made great strides in technical progress and invested large amounts of capital to meet those needs. The result is an overall productive capacity more than ample for today's markets, and with serious unbalance in wheat and cotton production.

Those who are not familiar with farming frequently ask why farmers don't gear their production more closely to prospective markets. Mostly because as relatively small individual producers they do not consider the effect of their output on the price of the product. But also because technical change is not reversible. Once investments have been made in improvements to increase output, they become imbedded in the cost structure as fixed costs. Unless prices drop precipitously, individual farmers cannot cut down on even the variable expenses for hybrid seed, pesticides and fertilizer.without reducing gross income more than expenses. Moreover, nearly four-fifths of the farm work is done by the operator and members of his family. On most farms, therefore, a reduction in output will not reduce labor costs.

Once farmers have committed themselves and their investments to farming. their alternatives are limited. They can shift to other enterprises if other products have more favorable income prospects, and if their farms are located in areas where other crops or livestock can be produced. In some areas, the younger members of the family, and even the younger farm operators, can turn to nonfarm employment. If many operators give up farming, their land becomes available for purchase or lease by other farmers. This may provide an opportunity for farm consolidation with resulting lower unit costs and higher farm incomes for those who remain.

But giving up farming, or buying additional land, are major decisions. Most farmers require some time to work them out. Perhaps the first inclination when income drops is to weather the storm by maintaining total output, or even increasing it in an attempt to hold income at former levels. Consequently, much of the job of balancing production with peacetime markets is still ahead of us.

Farm price and production programs were developed to help balance production with markets. And I shall make one forecast with considerable confidence that it will prove to be correct. Farm price and production programs of some kind will continue in operation, at least for the next few years. It therefore behooves us to think about the function of farm programs, and how they should enter into our outlook analyses.

They are intended to achieve nationally desirable objectives -- both for farmers and in the public interest. If the changes in farming promoted by farm programs could provide the most profitable opportunities open to farmers, they would constitute powerful incentives in achieving program objectives.

In the outlook approach to farm and home development, the market and production prospects, as these may be modified by farm programs, become the framework within which farm families develop farm and home plans which seem most suitable and profitable in their special situations.

Although the local and community conditions may introduce important modifications, I shall go directly to a consideration of the adjustment problem on individual farms in the light of the farm and family situation.

The Adjustment Problem on Individual Farms

In view of the market outlook for the next five years, the probable cost structure, and the farm programs in prospect, what adjustments can farmers make to carry through the transition years, and to take advantage of the better opportunities that may follow? We have already said that production may continue to press heavily on available markets, but that the market outlook is better for most of the livestock products than for the price-supported crops. Apparently, no relief can be expected from lower cost rates. Prices of building and fencing materials, farm machinery and motor vehicles are edging up, and taxes may continue their upward march of the last 10 years.

No general prescription will fit the diverse situations in which farmers find themselves in different farming areas, on different types and sizes of farms and with varying tenure, financial, and family situations. You are all aware that the problem has to be analyzed separately for each type situation. All that I can do here is to illustrate by showing the ramifications in one farming area. Suppose we take a family-operated farm in the corn-hog-dairy area of the Corn Belt, where the recent drop in hog prices has caused sharp reductions in net income.

Table 1 gives the average results on owner-operated family farms in this area as well as in three other areas, for 1940, 1954, and 1955. Preliminary results indicate that, on the average, net cash income may drop about $700 on hog-dairy farms in 1955. Suppose we try to illustrate what adjustments farmers with different financial and family situations could make in view of the prospects for the next 5 years. Perhaps the illustration will be clearer if we take two extreme situations with respect to financial and family conditions:

1. A young couple with children too small to help with the work. The operator, a war veteran, who started farming as a tenant after the war, and later bought a farm, say about 1951. His present real estate and short-term debts equal about 75 percent of the present value of his farm assets.

2. An older couple with no debts and some savings in addition to the farm investment. No children at home to help with the work; therefore, dependent on hired labor.

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The young farmer will have interest and amortization payments of $1,968 to subtract from his net cash income, leaving $2,906 available for family living and for maintenance of the farm plant. He may actually have somewhat less than that because he would hire more labor than the average farm in the area.

Can farmers who find themselves in such circumstances increase the cash income available for family living and farm maintenance? Is it possible to reduce operating costs and maintain output? To reduce costs more than gross income by reducing output? Can net cash income be increased by increasing output? What are the elements of flexibility for a farmer in similar financial circumstances?

Debt service must be paid. This is also true of taxes, insurance, and electricity. These are fixed charges. Some machinery and building replacement can be postponed, but only temporarily. If hired labor is reduced, the operator will have to work even longer hours than he is now doing, and perhaps also sacrifice some of the output. It might be possible to buy less protein feed, but unless previous arrangements have been made to substitute home grown legumes, the output of dairy products and pork might be reduced by more than the reduction of the feed bill.

If a larger acreage is devoted to grasses and legumes, it might be desirable to fertilize the remaining feed grain acreage more heavily in order to maintain production. The eventual result then would be an increase in total output, and probably also an increase in net income to a farmer in such financial circumstances. But it would involve extra cost and risk.

Suppose we now consider the older family with no debts and no children to help with the work. We are assuming that they are not old enough for retirement and Social Security benefits. But they probably could afford to slacken the pace of farm operations even at considerable sacrifice in farm income. They might seed a rather large acreage to grasses and legumes, raise fewer hogs, keep fewer cows, or even shift from dairy cows to beef. They would buy less feed and hire less labor. The risk would be lessened. Net income would be reduced, but this would be compensated by the opportunity for partial retirement. The basic capacity of the farm would be maintained, but it would be held in a partial reserve status. Output could be stepped up whenever such action seemed desirable.

Perhaps there are not many farm families who find themselves in these circumstances, but under present conditions, those who work with farm families could render excellent services by pointing out opportunities for slackening the pace of production where income is not the decisive determinant.

The results shown for Piedmont cotton farms in Table 1 illustrate another problem. Incomes on cotton farms in this area were at relatively low levels even in more prosperous years. Growing local markets may furnish some further opportunities for production of Grade A milk, meat, and some fruits and vegetables. But there has been little opportunity to accumulate capital for needed changes in farming.

Because of limited income opportunities in farming, many farmers in this area have shifted to nonfarm employment, but they have continued to live on farms. Perhaps this shift creates an opportunity for farm consolidation, for changes in the farming system and for higher incomes to those who remain in full time farming. But how is this change to be financed and carried out? Unless better income opportunities are available in full-time farming, should young people be encouraged to enter farming with the prospect of continuing at the income levels shown in Table 1?

I recognize that these are extreme illustrations, but perhaps they portray the wide variety of adjustment opportunities and of problems that arise in the outlook approach to farm and home development.

Balancing Production with Potential Markets

How rapidly we can achieve a better balance of production with markets than we now have will depend upon how many farmers can afford to operate less intensively as illustrated by the debt-free elderly farmer; and how many will have to maintain or even increase output; also on how many will find nonfarm opportunities more attractive than farming. The last change is likely to result in farm consolidation and higher incomes per family for those who remain in farming, but may not reduce total output very much.

As a result of mechanization and other improvements there are many farmers who have equipment and family labor that is only partly utilized. If they cut total production they will reduce the part of their output that is produced at the lowest cost per unit. If they also have pressure for increasing net incomes they are more likely to increase output than to reduce it.

Let me emphasize that I am referring to total output rather than to output of a single commodity. Output of specific commodities may change in line with alternative income opportunities, farm programs and other factors. Assuming average weather conditions, I do not see much prospect of a reduction in total farm output in the next few years. Our current programs attempt to control specific commodities, but not total output. And, as already mentioned, technological advances are not reversible.

A continued cost-price squeeze undoubtedly discourages new investments in farming that would increase output. To some extent, technical progress also is retarded. Better income prospects in other employment tends to reduce the number of workers in agriculture. But these forces operate rather slowly. In the meantime, most farmers maintain their operations in the hope of better days ahead. If they see a margin over variable costs, they may actually increase output as previously indicated.

Increases in total farm output, despite unfavorable cost-price relationships, is not a new phenomenon. It happened in the 1920's. Farm output increased 10 percent from 1918-20 to 1929. It has increased 16 percent from 1945-47 to 1955. Although reasoning from historical analogy is always dangerous, there are a surprising number of similarities between the two periods, also some important differences.

Looking forward, perhaps there is more hope for the market to grow up to our productive capacity than for any shrinkage of farm productive capacity to fit the size of the market. It should be emphasized, however, that market prospects call for shifting of production rather than for much of any increase in output during the next few years. The shifts that seem to be called for -- away from surplus cash crops and into hay, pasture, and eventually roughage livestock -- are of truly heroic proportions. The longer term market outlook points in the same direction. In many areas of the Great Plains, the cotton South, and elsewhere, these shifts also may mean larger family farms and fewer workers in agriculture, but improved incomes to those who remain in full-time farming. How the needed shifts can be made profitable to all farm people is a challenge to researchers, to extension workers, and to farm program agencies.

In the midst of our present worries about surpluses, perhaps we should reflect on how fortunate we are that our concern is with overabundance rather than with shortage. After all, the margin between surpluses and deficits is rather small, as we learned after the invasion of Korea in 1950. A severe drought could reduce our large stocks of feed grains and wheat rather drastically. In the present state of world uncertainty, we need reserve capacity, but we do not need all-out current production. We should seek out ways of maintaining reserve capacity instead of large surplus stocks; ways of shifting farm resources in the direction of the fastest growing points in the market; and ways of achieving a more prosperous agriculture for the benefit of all farm people.

* * *

Table 1.- Investment, production, income, and expenses on four types of farms, 1940, 1954, and 1955

Item	Type of farm											
	Dairy Central Northeast			Hog - dairy Corn Belt			Wheat - small grain-livestock Northern Plains			Cotton Southern Piedmont		
	1940	1954	1955 1/	1940	1954	1955 1/	1940	1954	1955 1/	1940	1954	1955 1/
Acres in farm	177	199	201	155	162	163	506	680	690	159	162	162
Total investment (Dollars)	9,600	26,300	25,690	15,440	42,500	43,740	10,830	42,640	41,480	4,760	13,970	13,620
Net farm production (Percent of 1947-49)	92	126	124	86	124	128	68	87	120	104	73	101
Production per unit of input (Percent of 1947-49)	99	115	112	92	113	116	87	91	117	106	85	116
Cash receipts (Dollars)	2,715	7,897	8,268	2,928	10,112	9,460	2,022	8,051	9,755	1,135	2,040	2,790
Cash operating expense " 2/	1,933	4,951	4,953	1,441	4,547	4,586	1,220	3,795	4,047	773	1,413	1,526
Net cash income "	782	2,946	3,315	1,487	5,565	4,874	802	4,256	5,708	362	627	1,264
Interest & amortization " 3/	432	1,184	1,156	695	1,912	1,968	487	1,919	1,867	214	629	613
Available for family living and farm maintenance "	350	1,762	2,159	792	3,653	2,906	315	2,337	3,841	148	-2	651

1/ Preliminary
2/ Excludes purchases of new machinery and buildings
3/ Assumes debts equal to 75 percent of investment, and interest and amortization payments equal to 6 percent of debt.

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THE OUTLOOK FOR FRUITS AND TREE NUTS IN 1956

Statement by Ben H. Pubols, Agricultural Economic Statistician,
at the 33rd Annual Agricultural Outlook Conference,
Washington, D. C., December 1, 1955

Consumption and Demand Prospects

Total supplies of fresh and processed fruits available for consumption until supplies from the 1956 deciduous crop are ready probably will be somewhat larger than in this period of 1954-55. But supplies of tree nuts are lighter. Fruit consumption per capita may increase a little this fall and in the first half of 1956 over the rate a year earlier. For 1955, per capita consumption of all fresh and processed fruits on a fresh equivalent basis is tentatively estimated at 195 pounds, compared with 193 in 1954.

With consumer incomes high and expected to increase further, domestic demand for fruit in 1956 is likely to be as strong as in 1955.

Deciduous Fruits

The 1955 crop of deciduous fruits, as estimated November 1, is about 3 percent larger than the 1954 crop but 3 percent under the 1944-53 average. The apricot, cherry, grape, plum, fresh prune, and strawberry crops are each considerably larger than the respective 1954 crops; the apple, pear, and cranberry crops are not greatly different from 1954; while the peach and dried prune crops are much smaller. Unfavorable weather cut production of these two fruits.

Although production of apples and pears is a little under 1954, the crop of winter pears is up considerably and the apple crops in New England and the Pacific Northwest are much larger this year. Supplies for marketing after the first of the year probably will be heavier than a year earlier.

The 1955 pack of dried fruits is expected to be moderately larger than the relatively small 1954 pack, mainly because of a heavy increase in raisins. To assist in the disposition of surplus raisins in the 1955-56 season, the U. S. Department of Agriculture in September announced a program to encourage exports of this commodity.

The 1955 pack of canned fruits, mostly deciduous, is expected to exceed the large 1954 pack and will be record or near-record large. The pack of frozen strawberries is record large and total output of frozen deciduous fruits in 1955 also will set a new record. Stocks of frozen deciduous fruits on November 1, 1955 were about 12 percent above a year earlier.

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With average or better weather, the 1956 deciduous crop probably will total a little above the 1955 crop. Production of peaches can be expected to be much larger than in 1955, especially in the Southern, South-Central, and Mid-Atlantic States, where spring freezes reduced the 1955 crops. Larger crops of apples and other fruits also can be expected in the same States. Prospective larger acreage of strawberries for harvest in 1956 indicates a heavier crop in the year ahead. Production of California dried prunes also may be up in 1956. But the apricot, sweet cherry and grape crops may be smaller.

Citrus Fruits

Over the next few years, production of oranges and grapefruit is expected to continue to trend upward. The rise probably will be more pronounced for oranges than for grapefruit. Most of the increase in grapefruit is expected to consist of seedless white, pink, and red varieties.

With continued favorable weather, total production of citrus fruits in 1955-56 probably will be about the same as in 1954-55. The 1955-56 crop of early and midseason oranges is expected to be slightly smaller than the 1954-55 crop, mainly because of a reduction in California. The Florida crop of early and midseason oranges is the same as last season, but the tangerine crop is 10 percent smaller. Early-season indications are for an increase of about 7 percent in the Florida Valencia orange crop. Total production of oranges is expected to be up in Texas and Louisiana but down in California and Arizona.

With lighter stocks of canned and frozen orange juice this fall than last and a larger crop of Florida Valencias in prospect, there is likely to be some increase in the pack of frozen orange concentrate this season. Grower prices for oranges probably will average higher this fall and early winter than last.

The 1955-56 grapefruit crop is moderately larger than the 1954-55 crop, the result of a 9-percent increase in Florida. Although stocks of canned grapefruit sections were much larger this fall than last, stocks of canned grapefruit juice were considerably smaller. Some increase in the pack of the canned juice this season seems probable.

Prospective production of lemons in 1955-56 is about 6 percent smaller than in 1954-55. With stocks of frozen concentrate for lemonade on October 29 about 46 percent smaller than a year earlier, there probably will be some increase in output of this product in 1955-56.

To encourage exports of fresh and processed oranges and grapefruit in the 1955-56 season, the U S. Department of Agriculture has now in operation an export program for these commodities.

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Foreign Trade in Fruit

Prospects for exports of fresh and processed fruit point to greater market opportunities in Western Europe during the 1955-56 season than in 1954-55. Business conditions are better and standards of living have improved. Western Germany and Denmark have liberalized import restrictions on certain U. S. fruits which will affect 1955 crop exports. The United Kingdom has announced authorizations for the importation of several U. S. fruits and fruit products during 1955-56. Supplies of deciduous fruits in Europe are expected to be much shorter this season than last, which should favor exports from the U. S. Although supplies of Mediterranean citrus fruits are larger in the 1955-56 season, they will be mostly out of the way by spring when the bulk of exports of fresh U. S. citrus occurs. Continued heavy exports of citrus to Canada can be expected.

With apple production in Canada in 1955 about one-fourth larger than in 1954, that country will have considerably more apples available for export this season than in 1954-55. But U. S. imports from Canada may be only slightly larger than the relatively light volume in 1954-55 because of the currently heavier stocks and reduced prices in the United States. Imports of bananas, per capita consumption of which is exceeded only by that of fresh oranges and apples, probably will be no larger during the year ending next June 30 than a year earlier.

Tree Nuts

Total production of the 4 major tree nuts in 1955 is about 3 percent smaller than in 1954. The almond and filbert crops are considerably smaller than in 1954, while the pecan and walnuts crops are slightly larger. However, the pecan crop is light for the second successive year. Grower prices for each of these crops is expected to average higher than in 1954.

Imports of almonds are expected to continue light in 1955-56, and those of filberts and cashews may be smaller than in 1954-55. But imports of Brazil nuts may be larger.

With favorable weather in 1956, increased production of tree nuts, especially pecans, can be expected.

This represents mostly the hightlights of the 1956 Outlook issue of "The Fruit Situation" for October 1955, a processed publication issued by the Agricultural Marketing Service

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THE OUTLOOK FOR MEAT ANIMALS IN 1956

Statement presented by Harold F. Breimyer at the 33rd Annual Agricultural Outlook Conference, Washington, D. C., November 29, 1955

The livestock producing industry may be compared just now to a heavy-set man climbing a stair. After completing four fairly steep steps--the four consecutive increases in meat output since 1951--the portly gentleman is puffing. He may be approaching a landing.

For the increases in meat production have been sizable. Almost 27 billion pounds of meat are being turned out in 1955. This is 6 percent more than 1954 output and 23 percent more than 1951. Consumers are being supplied 161 pounds of meat per person, 8 pounds more than was consumed last year, 25 pounds more than 1951, and the most since 1908.

The industry, like the corpulent gentleman, may be running out of steam. Price weakness encountered this fall is discouraging, especially to hog producers, while slaughter of cows and heifers has increased to a point that presages some contraction in cattle production.

Following the 1953 break in cattle prices, prices of meat animals proved fairly stable for 2 years. Then last winter, hog prices dropped ominously. This fall, both hogs and fat steers have slumped badly. Present setbacks are partly temporary. But the very high output and low prices this fall may arrest the current expansion in production. The outlook is for the volume of meat output to level out in 1956--for the stairway landing to be reached by the winded climber.

Livestock production will remain large. High incomes of consumers and strong demand for meat; acreage controls on export crops which divert cropland into feed use; lower support prices for feed grains; a search for sources of added income: all these factors will continue to support the raising, feeding, and slaughter of livestock.

Production of hogs has increased sharply the last 2 years. The annual pig crop was up 13 percent in 1954, and in 1955 the spring crop increased 9 percent more and a 10 percent gain in the fall pig crop was planned by producers in June. This expansion started from a low point. Our data show that the 60 pounds of pork supplied each consumer for consumption in 1954 was the least in 16 years. The 66 pounds in 1955 is a sizable gain, but it scarcely equals the average consumption rate of the last 10 years.

Low prices of hogs this fall, a great disappointment to producers, are explained by the sizable increase in supply of pork within a short time; by weakness in consumer demand for pork; and by a widening of marketing margins from their narrower values in early 1954.

Consumer demand for meat, while hard to measure, apparently is about as strong in 1955 as 1954. It has not increased along with rising consumer incomes. Demand has been weaker for pork than beef, extending a long trend away from pork.

Marketings of hogs from the 1955 spring pig crop, which began in August, have been especially large since the first of October. Slaughter of hogs from October 1 to mid-November averaged 18 percent above the same time of 1954. Having outrun the increase in the pig crop, slaughter probably has passed its peak and very likely will decrease in weeks ahead, both in actual number and in relation to last year. Nevertheless, slaughter will remain large for several months, as marketings from the larger fall pig crop will begin in February. Although prices of hogs will likely strengthen seasonally in early winter, substantial advances are not in prospect before late spring.

Despite lower prices of hogs, the hog-corn price ratio this fall is only a little below average. Factors influencing spring farrowings, taken together, point to the likelihood of no great change in the spring pig crop. (Farmers' intentions for spring farrowings will be reported December 22). While slaughter of hogs in the first half of 1956 will total above 1955, that in the second half may show little or no increase. This halt to the supply uptrend could allow hog prices to regain their 1955 level by around the middle of 1956, and perhaps at times thereafter to exceed prices of a year earlier. Because of lower values in the first half, the year's average price may fall a little short of the 1955 average.

Both inventory numbers and annual slaughter of cattle and calves have been edging upward to successive new highs. The record 1955 slaughter is up 2 percent. It may have been large enough to arrest the uptrend in numbers. More significant, however, is the 7 percent greater slaughter of cows and heifers estimated for 1955. The fourth increase in a row, it probably reduced the productive capacity of the national cattle herd for 1956 and beyond, and seems to promise a cyclical decline in inventories and slaughter.

The decline will probably be less than in previous cycles. Strong demand for meat and ample feed supplies have softened the stringent pressures that marked previous cattle cycles. These factors have especially retarded slaughter of calves, which in 1955 is 2 percent below 1954. Retention of young stock will make continued high volume of cattle feeding possible, and will keep cattle numbers higher than would normally be expected in the downward phase of the cattle cycle.

For 1956, cattle slaughter will stay large but might dip below 1955. Steer slaughter may be very nearly equal to 1955, but producers may begin to slow down their marketings of cows and heifers. However, feed conditions and price trends during the year could alter the cow slaughter rate from present prospects.

If cattle slaughter does indeed turn downward in 1956, cattle prices would likely commence a cyclical recovery. Changes within the year would be modest. Price strength is more probable later in the year than in early months, when the large supply of fed cattle will likely limit prices.

About as many cattle will probably be fed this feeding year as last. They will be ready for market earlier than in 1955 because they went into feeding lots earlier and at heavier weights. Some improvement in fed cattle prices is in prospect this winter; a further increase is possible later. Profits in cattle feeding, while likely to be no more than average, could be higher on long feeding for late sale than on short feeding for winter sale. This would be the opposite of 1955 when short feeding for sale last winter and spring returned the greatest profit.

Sheep and lamb numbers, alone among all livestock, have trended downward for several years. However, their decline is somewhat misleading since rising productivity (higher percentage lamb crops) has maintained annual production quite well. Enlarged by an apparent further small reduction in inventories, sheep and lamb slaughter in 1955 was the greatest since 1948. Slaughter in 1956 promises to be almost as large, unless the decline in inventories should be ended during the year. A reversal of the 4-year downswing is expected sometime in the next few years, and when it occurs slaughter will be reduced.

Sheep and lamb prices have been about equal to a year before during most of 1955. A reduction is not expected in 1956. Prices could increase slightly.

Prices of wool received by farmers for the 1955-56 season will average about 44 to 46 cents a pound. The difference between the average price and the support of 62 cents will be made up by payments. The incentive support will continue at the same price and in approximately the same form in 1956. Market prices of wool will likely again be substantially below the incentive level.

For this outlook session we took a look at prospects for meat animals 5 years ahead. Our report is contained in the kit of materials being distributed at this meeting, and is available separately on request to the Marketing Information Division, Agricultural Marketing Service. A digest is in the Livestock and Meat Situation for November 14. Our conclusions are that demand for meat will fare well in years ahead, if the United States economy realizes its potential for further gains in employment, output and income. Supplies of feed will be large. The anticipated downswing in cattle numbers will likely hold beef supplies below the 1955 record. But numbers will turn upward again. By the early 1960's cattle numbers and beef output will probably be up to new highs. And in intervening years beef supplies will be comparatively large, even if not fully as large as in 1955.

Production of hogs will likely increase later in this decade after a possible reduction late in 1956 and 1957. It is projected upward at the same rate as the growth in population. Supplies of pork per person thus are not likely to differ much 5 years hence from presently. Shifts of demand from pork to beef make any greater expansion unlikely.

Sheep numbers are expected to be larger 5 years in the future. This increase too will be moderate, and supplies of lamb and mutton per person are estimated at about the same as the 1955 consumption of 4½ pounds.

Prices are considered likely to be rather favorable to livestock producers and relatively higher for cattle than hogs. Meat animals as a whole are expected to hold an increasingly important position in the agriculture of the United States, and will likely contribute a rising proportion of total income to farmers.

To return to the opening analogy, our escalading gentleman may rest a bit, but soon start upward again.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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Household Economics Research Branch

THE DEMAND FOR HOUSEHOLD DURABLE GOODS AND HOUSING

Talk by L. Jay Atkinson, Economist, Office of Business Economics, U. S. Department of Commerce, at the 33rd Annual Agricultural Outlook Conference, Washington 25, D. C., Wednesday, November 30, 1955.

Production of major household goods has been at a record rate in 1955. In the past few months production has been sustained at a rate a little more than 50 percent above the average for the years 1947-49. The recent plateau in production followed a period of a year and a half of general advance.

Although the production trend of the past 2 years for major household durables is roughly similar to that of total industrial production, there has been a tendency for adjustments in household goods to be made more quickly than total industrial production. Beginning in 1953, a cutback in major household goods was made somewhat more rapidly than total production, and during most of 1954 output of these goods was advancing, whereas total output did not turn upward until the third quarter of 1954. Thus the advance in output started a full half year earlier for major household goods than for output as a whole. The earlier turn-up in output of these products in 1954 appears to reflect both (1) an earlier adjustment in inventories aided by rather steady consumer buying followed by (2) a rise in buying associated with an increase in housing starts beginning in the summer of 1954.

One of the striking changes in the past year or 18 months is the considerably greater increase in output of major household durables than in dollar sales of home furnishings and appliance and radio stores after allowance is made for price declines (about 5 percent) during this period. Part of the explanation of the considerable difference in the movements of production and retail sales of these dealers is that output at the beginning of 1954 was below the rate at which such goods were moving to final purchasers. Appliance and radio-TV stores sell large quantities of merchandise other than major household durables. Also a considerable portion of household durables--about one-half of retail sales--move through other types of retail stores, such as department stores, furniture stores, hardware stores, and farm implement dealers as well as through non-retail outlets which account for most of the installations of such products in new houses. Sales of major appliance and radio-TV departments of department stores have had a large increase in sales this year, roughly comparable with the rise in manufacturers' shipments and there is evidence of increased promotion of appliances by other types of stores. There has been only a moderate rise in stocks held by manufacturers and wholesalers. Data on stocks of these products in retail stores are so piecemeal as to be inconclusive.

In any case, however, demand is strong for major household durables with sales in 1955 at a record rate. The most recent figures show that the rising trend is still underway. With rising cost of raw materials and labor, the easing in retail prices of the past 2 years has been less pronounced in the most recent quarter. Increases in wholesale prices of household durables have become more common than reductions. Consequently, the declining price trend for these products appears to have been interrupted at the present time.

On the whole consumers' prices for major household durables appear to reflect the following influences (1) some rise in materials prices and in wage rates on the one hand offset by (2) a narrowing in distributive margins and services, and (3) a gradual increase in the efficiency of production resulting from improved and often simplified design of products and further mechanization of production.

Shifts in distribution have included a marked advance in sales of major appliances and radio-TV by department stores in the past year. This strong rise follows a period in which such sales tended to lag as sales of these products showed larger gains in other types of stores including those specializing in discounts from advertised list prices for well-known brands. The considerable increases in sales by department stores have accompanied vigorous merchandising including special sales and promotions featuring discounts from list prices, stepped-up advertising, and liberal credit terms. Furniture and homefurnishings stores have also experienced substantial increases in sales in 1955 as compared with a year earlier, whereas smaller advances have been registered by appliance and radio-TV stores. On the basis of production data and department store sales, the difference in sales between the furniture stores and the appliance stores appears to be the result of competitive influences.

Some easing in prices

Moderate reductions have occurred in retail prices of home furnishings during the past year, and the trend over the past 2 or 3 years has brought an appreciable reduction. If we try to compare movements in wholesale and retail prices of housefurnishings, it appears that more reduction has occurred at retail than at wholesale for each of the principal groups, i.e. furniture, household appliances, and radio-TV. The apparent paring of retail margins observable for these products has become more common in the various types of stores handling these wares. "Off-list" pricing has been most widespread for electrical appliances including radio-TV as a series of developments have focused attention on production and distribution of these products. There has been considerable standardization of models into a relatively few types and these have been assembled by improved mass-production methods. A growth in demand for these products has been a part of the housing boom of the past several years and it has been accompanied by mass-media advertising which has stressed the features of the latest models and identified the specific models available with manufacturers' guaranty or warranty. These changes have been accompanied by some shifts in distribution, including a reduction in retailers' services and in price margins, and increase in instalment financing, and the rise of limited-service stores featuring standard brands at off-list pricing.

From the consumers' standpoint the variety of the distribution and service available requires rather careful shopping in order to obtain the combination of product and service desired for the various types of merchandise. Though individual families' desires will vary, a considerable amount of information is required in order to make the appropriate purchases. Fortunately a great deal of factual information is available from the manufacturers and the distributors as well as from other sources.

Housing

The strong market for new houses has been an important influence in the expansion of business activity since the end of World War II. For nearly a decade no substantial letup has occurred in residential construction, and the number of nonfarm housing starts has exceeded 1 million in each of the past 6 years. In the current expansion in economic activity, residential construction played a key role, expanding vigorously after the first quarter of 1954 before most sectors of industry began to rise.

During the course of 1955, there has been a moderate decline in housing starts from the very high rate prevailing at the beginning of the year, with appropriate adjustment for seasonal influences. In October, private nonfarm housing starts were at a seasonally adjusted annual rate of 1,240,000, slightly lower than a year earlier. The number of housing units in proposed home construction in FHA applications and in VA requests for appraisals was also somewhat below a year ago.

Projection of housing starts by the Departments of Commerce and Labor for 1956 has been placed at 1.2 million, which is about one-tenth below the estimate for this year but about even with 1954. The value of housing construction may show less change, since costs have advanced about 5 percent during the past year, and a continuing trend toward somewhat larger houses with more quality features is expected. Expenditures for additions and alterations may be larger in 1956.

A series of mild measures gradually tightening credit during 1955 and the recent slight decline in housing starts are largely a reversal of changes which occurred about a year earlier. An easing in the money market beginning in the latter part of 1953 and continuing in 1954 was followed by a rise in residential construction activity during the latter part of 1954, after adjustment for seasonal influences.

The easing in mortgage financing was reflected in more ready availability of mortgages with liberal credit terms, chiefly those guaranteed or insured by the Federal Government. A substantial reduction was made in minimum downpayment requirements. Some lengthening in the amortization period for mortgages and a reduction in interest rates for conventional mortgages also occurred. The liberalization of credit terms had a stimulating influence upon the purchase of new houses.

Whereas, the liberalization in mortgage lending in 1953 and 1954 was accompanied by a leveling out in income after taxes and a decline in general business activity, the moderate tightening in mortgage terms and in the supply of funds for lending during 1955 has accompanied a substantial advance in disposable income and in general business activity.

Let us now turn to an appraisal of the basic influences affecting the demand for housing including physical factors such as population growth and migration as well as economic factors.

Influence of population growth

Total population is increasing about 1-3/4 percent per year, or about twice as fast as in the decade of the 1930's. In terms of actual numbers, population of the United States is now increasing about 2-3/4 million per year. This is roughly three times the average annual increase during the decade of the thirties and about 50 percent above that of the twenties.

The growing need for more housing space, accompanied by high income and generally favorable financing conditions, has contributed not only to the high rate of residential construction as a whole but also to a more rapid growth in one-family houses than in multi-family units as a part of the general suburbanization movement.

For a number of years after the war, the emphasis was upon relatively small houses, with special financing provisions introduced in 1950 for "economy" houses within the budget of moderate income families. In more recent years, however, there has been some movement toward larger houses as many families have outgrown their accomodations. The average floor-space of new single-family houses insured by FHA has risen 10 percent in the past 5 years.

Shifts in Age Distribution

An important consequence of the changing rate of population growth in the past generation that affects housing requirements is a shift in age distribution. This shift stems primarily from two developments (1) the long decline in the birth rate in the twenties and thirties and the subsequent extended advance, and (2) the increase in life expectancy, which has been especially marked for women.

New family formation

One aspect of shifts in age distribution which is especially relevant to housing requirements is its bearing upon the change in new family formation. This in turn is closely related to changes in the number of households. The birth pattern of the past is the primary influence affecting new family formation, although other factors, particularly the depression and World War II, have also been important.

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For a number of years the average age at first marriage has been in the neighborhood of 20 for females and 23 for males, while the proportion of the population getting married, though very substantially higher than 20 years ago, has been relatively stable. The average annual number of each sex in the age group 20 to 24 years is about equal to net new family formation.

Since the classes born in the years 1931-35 when the birth rate was quite depressed are now in this age group, net new family formation is now at a relatively low rate. Little further change in the size of the classes reaching marriageable age will occur for the next few years. During the decade of the 1960's, however, a substantial rise is in prospect, and in the latter part of the decade the number reaching these ages will be fully half again as large as at present.

The maintenance of the high current rate of building for the next few years turns upon other influences besides new family formation.

Among these, changes in the amount of "crowding" or "doubling up" of families in households do not appear likely to be of major importance in this period. The group of 1.3 million couples without separate households at the present is somewhat smaller than in 1930, following the building boom of the twenties, and the proportion doubled up now is considerably lower.

The number of people in the older age groups is increasing both because of the natural effect of a growing population--i.e. the rising trend in births a generation or more earlier--and the reduction in mortality. Moreover, with more adequate retirement and other supplementary income for the rising proportion of the population in the upper age groups, more of the older couples as well as single persons are able to maintain their own households.

In the 5 years ending April 1955, the total number of households increased at an annual rate of 830,000. Though the reported annual changes are somewhat erratic, there is a tendency in recent years for the rate of growth to slacken somewhat. This slackening reflects the smaller classes reaching marriageable age in recent years, and a decline in the rate of undoubling of married couples and related persons. The "high" series projected by the Census Bureau is for an average increase of 800,000 households annually in the next 5 years.

In considering households in relation to the demand for new residences, two types of additional influences deserve attention, even though statistical information concerning them is decidedly piecemeal.

The first is the role of conversion of nonresidential structures to residencies and of subdividing existing housing structures into additional households. The second is the reverse influence of withdrawal of houses through the various processes--negative conversion, demolition, abandonment, and accidental losses.

Scattered information available suggests that the addition of households through these processes was substantially larger than withdrawals in the nonfarm housing market during the decade of the 1930's and again in the 1940's. In recent years, however, reports from selected areas suggest that withdrawals from the housing market have become more important, amounting possibly to as much as 250,000 to 300,000 units annually for the nonfarm housing market.

Up to this point we have been considering the influence of total population and household formation for the United States as a whole. Let us turn to the specific influence of shifting population needs within and between the various sectors of the nation.

Shifting population needs

To a considerable extent migration tends to cancel out in a national equivalent of "musical chairs," but there are strong tides of "net" migration. The oldest of these is the net movement of population off the farm into urban areas. In recent years, this population shift has required about 150,000 nonfarm dwelling units annually in addition to that suggested by household growth for the nation as a whole.

A second major migration is from the central areas of cities to the suburbs. The net contribution to housing demand comparable to that occurring in the farm areas does not materialize, however, since the houses left behind in the cities by the suburbanites are largely occupied by new arrivals in the cities, mainly the people who left the rural areas.

The third major net migration is the movement "toward the sun"—to the far Western and Southwestern States and Florida. To the extent that the net migration is from metropolitan areas, the dwelling units left behind are largely available for occupancy by others, and thus total housing requirements are little affected. On the other hand, net movement from rural areas and villages remote from metropolitan areas may add substantially to housing requirements.

Basic demand factors

Although it cannot be measured in any precise way, it is apparent that the influence of the substantial general rise in income per spending unit or per household from the prewar to the postwar period has been a basic factor in the strong postwar housing market. These changes have brought sharp declines in the number of spending units in the lower and lower-middle income groups and large rises in numbers in the upper-middle and higher income groups even after rough adjustments are made for changes in prices.

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The Consumer Finance Survey has found that purchasers of new and used houses are more concentrated in the upper income brackets than are home owners as a group. This appears to reflect somewhat greater mobility for higher income families as well as a tendency to time purchases of houses in periods when income is high.

Equity of individuals

Large liquid asset holdings have also had a favorable influence upon the demand for housing since the end of World War II. Throughout this period the liquid asset position of individuals as a group has been more favorable than for any year before the war for which data are available, though there has been some decline in liquidity from the war years.

Holdings of nonliquid assets or equity of individuals are also an important influence affecting the demand for housing. Much of such equity is in houses, and the purchase of a house often involves the sale of another. Accordingly, the strong trend in the price of used houses in most of the postwar period has been an important--though not necessarily an independent--influence affecting the sale and hence the construction of new houses. The average price of used houses purchased with VA-guaranteed loans has advanced slightly in the past two years following extended advances in earlier years.

Mortgage Financing

Let us now turn to the influence of changes in mortgage financing in the past two years. A general easing in credit which began in the latter part of 1953 and extended into 1954 brought an increased supply of funds for mortgage commitments and an accompanying liberalization in terms available to the home purchaser. The relaxation in terms during this period is most readily seen in the shift in the character of loans guaranteed by the Veterans Administration.

Easier terms for VA loans

For VA mortgage lending, a progressive easing in terms during 1953 and 1954 is reflected in the rising proportion of 100 percent loans by VA and the proportion with maturities over 25 years. Though VA loans are not representative of home financing generally, they are an important part of the total and are the group for which expansion was most marked in 1954 and early 1955.

Some tightening in the money market about the beginning of 1955 began to affect advance commitments. The proportion of primary loans closed, however, under VA guaranty for the full purchase price ran around 40 percent throughout the first half of 1955 and those with maturities over 25 years were an equally important part of the total. Loans closed in the third quarter also included a high proportion of 30-year, no-downpayment loans, though new applications required a minimum of 2 percent downpayment and a maximum amortization of 25 years.

Requests for VA appraisals have declined since May of this year, following about a year of unusually high activity. They are now moderately lower than a year ago. Applications for FHA commitments increased only moderately in the past year and have declined in recent months.

Credit relaxation appears to have been especially important in the rise of residential construction last year and some tightening has contributed to a slight decline this year. Purchasing terms continue to be favorable though they are not so liberal as a year ago. A large and rising flow of income has been an important influence supporting the high volume of residential activity during a period in which other factors have also favored the housing market.

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Consumer Durables Output and Private Housing Starts

(Seasonally adjusted)

Index, 1947-49=100	1950	1954				1955			
		I	II	III	IV	I	II	III	October
Major consumer durables, total	149	119	128	124	127	151	164	173	172
Autos	159	133	140	119	127	170	186	194	196
Major household goods, total	143	109	119	130	130	135	146	156	153
Furniture and floor coverings	120	99	96	105	105	108	113	120	-
Appliances and heaters	132	106	113	112	113	132	147	1/146	-
Radio and television sets	243	148	206	259	257	224	239	288	-
Private housing starts (Annual rate, thousands of units)	1,340	1,113	1,120	1,236	1,386	1,384	1,361	1,272	1,242

1/ July and August.

Sources: Major household durables, Board of Governors of the Federal Reserve System; housing starts, U. S. Department of Labor and U. S. Department of Commerce.

11/29/55

Consumer Price Index: Retail Prices of Selected Items and Specified Groups

(1935-39=100)

	1950	1954				1955		
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.
All furniture and bedding.....	222.8	237.3	237.0	237.5	237.2	234.8	232.0	232.7
All furniture.....	215.7	228.0	227.8	228.4	227.9	224.9	221.4	222.4
Other housefurnishings:								
Sewing machines.....	166.2	185.6	184.7	183.6	182.4	179.4	179.9	178.9
Washing machines....	197.6	205.3	203.3	202.8	202.0	199.0	198.3	198.5
Vacuum cleaners.....	135.2	155.6	150.6	154.5	151.8	150.9	145.5	147.7
Refrigerators, electric.....	142.7	134.3	128.0	127.7	125.0	126.5	125.3	118.7
Television sets 1/....	--	79.8	79.2	74.8	73.9	73.9	72.9	72.8
Radios, table.....	164.9	177.0	173.5	172.2	170.5	168.4	167.3	166.1

1/ December 1950 equals 100.

Source: U. S. Department of Labor, Bureau of Labor Statistics.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

THE OUTLOOK FOR FATS, OILS AND OILSEEDS IN 1956

Statement presented by S. Gershben at the 33rd
Annual Agricultural Outlook Conference,
Washington, D. C., November 30, 1955

Certainly the most outstanding feature of the past marketing year was the huge quantity of exports. We shipped abroad about 4.2 billion pounds of fats, oils and the oil equivalent of oilseeds. This was 600 million pounds more than the previous high attained the year before and was achieved only by sharply reducing our stocks of food fats and linseed oil. Exports were equal to about 30 percent of total production from domestic materials. Record quantities of edible vegetable oils, soybeans, tallow and greases and butter were shipped abroad. More lard also was exported than a year earlier and shipments of linseed oil and flaxseed continued heavy.

Export prospects in 1955-56 again will be the major consideration as exportable supplies will be at least as large as last year. Production of all fats and oils is forecast at 14.4 billion pounds, 850 million more than the previous record of last year. This increase will offset reduced beginning stocks.

Fortunately, present indications are that total exports of fats, oils and oilseeds in 1955-56 will not differ materially from last year. Continued large exports of all the major types are anticipated. Heavy shipments will be encouraged by shortages in world supplies of sunflower and olive oils, reduced inventories abroad, high economic activity in our major world markets, good dollar position of many foreign countries, competitive prices for many U. S. commodities, and various U. S. Government programs.

An important factor in determining the level of world trade and hence U. S. exports of fats, oils and oilseeds in 1955-56 will be the quantities imported into Russia and Eastern Europe. These areas have been taking increasingly larger supplies. Imports (excluding overland trade with China) rose from only 85 million pounds in calendar 1950 to 795 million in 1954. This was equal to one-third of the increase in total world exports. Russia and Eastern Europe continued to take large amounts in 1955.

Now I would like to look at the individual commodities.

Lard supplies in 1955-56 will be about 300 million pounds more than last year if production increases as anticipated. More lard probably will be used in shortening as prices are likely to be down from last year and low relative to the edible vegetable oils. Present prospects suggest that exports will rise above last year's level.

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Domestic consumption of inedible tallow and greases has been relatively stable during the past four years. Declining use in soap has been counterbalanced by an expansion in other outlets such as fatty acids and animal feeds. These trends probably will be maintained in 1955-56. Supplies will be about 100 million pounds larger as output expands, but exports are expected to rise to a new high and there may be little change in carryover stocks. Although prices may decline from recent levels, the 1955-56 average probably will be greater than a year ago.

Cottonseed output in 1955 is estimated at 6.1 million tons, 7 percent more than last year. Although acreage was cut 14 percent, due primarily to a reduction in the national allotment, yields were the highest of record. Prices to farmers for 1955 crop cottonseed are likely to average near support ($42 per ton, purchase price, basis grade 100, $8 less than last year) but substantially below last year's season average of $60.30 per ton. Lower prices for cottonseed reflect reduced returns for both oil and meal. Linter prices are about the same as a year ago.

The U. S. Department of Agriculture on October 14 announced a marketing quota of 10 million bales of cotton for the 1956 crop, the minimum permitted by law and the same as for the 1955 crop. However, because legal provisions resulted in the use of a higher yield than a year ago, the national acreage allotment for the 1956 crop was set at 17.4 million acres, 0.8 million below the 1955 level. If cotton production next year is the same as the marketing quota and the relationship between lint and cottonseed is the same as the average for the past 5 years, output of cottonseed would total about 4.1 million or approximately one-third less than this year. Yields would have to be down sharply from the 1955 record level if production of cottonseed is to be no larger than what would be obtained from a cotton crop equal to the marketing quota.

The 1955 soybean crop is estimated at 372 million bushels, 29 million more than last year. Crushings, exports and carryover stocks will rise to new highs.

Exports have become a major outlet for U. S. soybeans. Last year, 17 percent of the total supply was shipped abroad compared with 14 percent for the 1953 crop, 11 percent for 1952, and only 6 percent in 1951.

Although there may be an increase in soybean production outside the U. S., due to better crops in China, Canada and Japan, the export outlook is favorable for the record U. S. crop. In mid-November, soybean prices were about 20 percent less than a year ago and remain competitive with Manchurian beans. Total exports for the marketing year probably will reach at least 65 million bushels compared with 60 million in 1954-55. Inspections of soybeans for export from October 1, 1955 to November 18 totaled 12.4 million bushels, 1.5 million more than last year. Western European requirements probably are larger. Last year 25 million bushels were imported from the United States. Japanese imports, our major market, from the United States for the first 6 months of the marketing year are expected to amount to more than 12 million bushels. Additional quantities taken after next March probably will bring the total to about the 20 million bushels taken last year. Canada also is likely to take about as much as a year ago, 8 million bushels, in spite of a 0.7 million bushel increase in production.

Prices to farmers for 1955 crop soybeans are being supported at a national average farm price of $2.04 per bushel, 18 cents less than a year ago. The support is equal to 70 percent of the February 15, 1955 parity price compared with 80 percent of parity for the 1954 crop. Prices received by farmers in the latter part of November were near support. Any seasonal increase through the spring would be modest because of large supplies.

If the 1956 soybean crop should be about the same size as this year, then about 2 billion pounds of all food fats excluding butter (but including the oil content of soybeans) would be available for export in 1956-57. This assumes that 1956 cotton output would be no larger than the marketing quota for that crop and little change in production of other food fats. Although about 200 million pounds below the 1954-55 level and less than the anticipated shipment in 1955-56, this still would be about 400 million pounds more than any previous export. The effect on prices of this modest reduction in exportable supplies might be offset by some decline in the export demand.

Some recent export markets may be smaller if Argentine production of sunflower seed is encouraged by higher guaranteed prices to farmers by the Government. Also, Mediterranean olive oil production may soon recover. Similarly, it is possible that foreign soybean production will increase in the next 5 years particularly in Brazil. In that country, soybeans are a good crop for rotation with wheat, the potential amount of available land is large and a big processing plant is being erected in the growing area. These factors, along with the expected steady increase in edible grade palm oils and peanut production, may have a limiting effect on export markets of the future. On the other hand, increasing populations and improving standards of living abroad tend to assure the United States of continuing large export markets although perhaps not as great as the 2.4 billion pounds (including the oil equivalent of soybeans) shipped in 1954-55.

Production of oilseed meals per grain consuming animal unit in 1956-57 probably would be down moderately from the anticipated 1955-56 level if the cotton crop is near the marketing quota. The level of exports also will be an important factor. About 500 thousand tons, 6 percent of output, were shipped abroad in 1954-55. Shipments probably will continue heavy in 1955-56.

Price support for soybeans is discretionary. As yet, no announcement as to support for the 1956 crop has been made.

The 1955 flaxseed crop totaled 43 million bushels. This is slightly more than a year ago and about 11 million greater than probable domestic use. Flaxseed prices to farmers are around the support level.

Unlike in recent years, prospects for exports of U. S. flaxseed through commercial channels and at prices at least as high as the 1955 support level appear reasonably good. During the past two crop years, world exports of flaxseed and linseed oil averaged over 56 million bushels each year. Sources other than the United States provided 41 million bushels in 1953-54 and only 31 million bushels in 1954-55. The rest were CCC supplies sold below U. S. prices.

Present indications are that exportable supplies from other countries in 1955-56 may total between 35 and 40 million bushels. Supplies from Argentina are expected to be down from last year but will be more than offset by increases in other areas, largely Canada.

Export availabilities from countries other than the U. S. plus CCC sales probably will total about 42 to 47 million bushels. If minimum requirements (including about 5 million to Russia) are about 50 million bushels -- 5 to 8 million bushels less than takings during the past two years -- there would appear to be some prospect for commercial exports of U. S. flaxseed. World imports may be less than last year because of a substantial rise in prices since the depletion of large stocks in the U. S. and Argentina.

Production of flaxseed in 1956 probably will continue well above domestic need, assuming average growing conditions. Over 90 percent of the crop is grown in Minnesota, North and South Dakota where alternative land uses are limited.

The U. S. and Canada have become major exporters of linseed oil and flaxseed in recent years, mainly because of a sharp decline in exportable supplies from Argentina. The decline in Argentine production has reflected Government policies that were more favorable to industry than agriculture. Prior to World War II, Argentina was by far the major source of world supplies, exporting 81 percent of total exports in calendar years 1934-38. Prospects are that importing countries will continue to need large quantities of U. S. and Canadian supplies. In 1934-38 world exports of flaxseed and linseed oil totaled 71 million bushels. However, the U. S. had a large net import balance in those years, taking 17 million bushels. Consequently about 54 million bushels went to other areas. Now large quantities have to be shipped from the U. S., just to bring total availabilities to other countries up to the prewar level. In the U. S. a rising population and an expanding economy have resulted in more linseed oil being consumed than formerly, although down on a per capita basis, despite replacement by synthetics and other oils. This would suggest that if prosperity is maintained in other countries, they would continue to require at least as much oil as before World War II. Another factor is whether Russia will continue to import large quantities of linseed oil. CCC no longer has large stocks of linseed oil on hand so the possibilities for commercial exports in future years are greater than they have been.

Support on U. S. flaxseed is discretionary with the Secretary of Agriculture at any level from 0 to 90 percent. The 1955 crop is being supported at 65 percent of parity, $2.91 per bushel, farm basis. Supports have been reduced each crop year since 1953 but are still higher than for the 1950 and 1951 crops. As yet, no support price has been announced for the 1956 crop. Canada does not support flaxseed prices. World price movements over the past crop year suggest that U. S. flaxseed prices are near a level which will permit sizable commercial exports.

There is practically no tung nut or castor bean production this year. The tung crop was severely damaged by freezing weather last spring and about the only castor beans raised are those being used for seed or experimental purposes.

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THE OUTLOOK FOR PEANUTS IN 1956

Statement presented by S. Gershben at the 33rd
Annual Agricultural Outlook Conference,
Washington, D. C., December 1, 1955

The 1955 peanut crop will provide many more peanuts than necessary to meet food and farm uses and prices to farmers for Spanish and Runners are likely to be near the loan value. Prices for Virginia type peanuts have been well above the loan value. The loan value is the support price less about half a cent for storage, inspection, grading and expenses of cooperatively marketing the peanuts. Prices so far this year have been about 11.8 cents per pound compared with the national average support level of 12.2 cents.

Production of peanuts in 1955 is estimated at 1,739 million pounds, 716 million more than last year's small output. Most of the rise reflected a record yield, although harvested acreage also was greater. Larger acreage is due to a 7.5 percent increase in the allotment and the picking and threshing of a greater percentage of the allotted acreage. Compared with last year production in the Southeast increased the most followed by the Southwest and then the Virginia-North Carolina area.

Civilians in recent years have been consuming about 6.5 pounds of peanuts, farmers' stock basis, per person. Last year consumption fell about half a pound because of reduced supplies and higher prices. In March 1955, the import quota for the year was raised from 2 to 51 million pounds, shelled basis, and in May all restrictions on the quantity of shelled peanuts to be imported through July 1955 were removed. Imports rose sharply last spring and the total for September 1954-August 1955 was 180 million pounds, farmers' stock basis. With large supplies again available and prices lower, consumption in 1955-56 is likely to return to about 6.5 pounds per person. If farm uses are about the same as in recent years, about 500 million pounds, nearly 30 percent of the crop, would be available for crushing, exports and addition to stocks.

As most of the excess peanuts will be acquired by CCC under the support program, the quantity crushed and exported will depend to a large extent on Governmental sales policy. The Corporation has announced that it will purchase No. 2 shelled peanuts, which are the lower quality edible nuts, at specified prices for diversion into oil or export. Purchases for diversion will be made only under conditions of surplus and will be terminated whenever they appear to be no longer needed. CCC also can call its loans on farmers' stock peanuts.

Prospects are that prices received by farmers for 1956 crop peanuts will be lower than for the 1955 crop. The drop would reflect a reduction in the support price and production large enough to keep prices around support.

Present legislation provides for the transition from "old" to "modernized" parity for peanuts at the rate of 5 percent of the old parity price per year beginning with January 1956. Thus the parity level for the 1956 crop will be equal to 95 percent of the old parity. The old parity for peanuts on October 15, 1955 (the latest month available) was 13.5 cents per pound compared with 10.9 cents for modernized parity.

Another factor in determining the support level for the 1956 crop is the relationship between the estimated supply and the "normal" supply for that marketing year. For example, if the estimated supply (carryin stocks, production and imports) is expected to be not more than 108 percent of the normal supply, support would be at 90 percent of parity. If the supply percentage is more than 130 then support would be at no less than the minimum of 75 percent. Normal supply is defined by legislation as the estimated domestic consumption and expected exports plus a carryout equal to 15 percent of the two.

The estimated supply, and consequently the support level for the 1956 crop, will depend largely on the extent to which surplus 1955 crop peanuts are acquired and disposed of by CCC. The greater the carryover, whether in Government or commercial hands, the greater the supply percentage. If crushings and/or exports aren't substantial, the supply percentage would be large enough to depress the minimum support level down towards 75 percent of parity. (The sliding scale went into effect with the 1955 crop but the supply percentage as estimated last spring kept the support at 90 percent of parity.)

The following is an example of the probable range of support prices for the 1956 crop.

Assuming no change from the October 15, 1955 level in the index of prices paid, interest and taxes, transitional parity in 1956 would be 12.8 cents per pound (95 percent of the old parity of 13.5 cents). Support at 75 to 90 percent would range from 9.6 cents to 11.5 cents per pound. Support for the 1955 crop is 12.2 cents per pound, 90 percent of parity.

The 1956 national allotment for peanuts is 1,610,000 acres, the minimum set by law. Initially, the 1955 allotment also was set at the minimum but it was raised 7.5 percent last May. With average growing conditions in 1956, yields would be high enough to provide a moderate surplus of peanuts above probable food and farm uses.

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THE OUTLOOK FOR COTTON

Statement presented by Frank Lowenstein at the 33rd Annual Agricultural Outlook Conference, Washington, D. C., November 30, 1955

The outlook for cotton during the year ahead is for very large supplies in relation to disappearance. A record supply of about 25.9 million bales in the 1955-56 marketing year and estimated disappearance less than 12 million bales will leave a record high carryover of about 14 million bales at the end of the marketing year.

With the exception of the 1950 crop, cotton production has been larger than disappearance each season since 1947, as shown in figure 1. For the past 3 crops (1953 to 1955) a record high yield per acre has been established for each crop, as shown in figure 2. For 1955, the acreage in cultivation on July 1 was about 14 percent smaller than a year earlier but the crop increased about 7 percent. Yield per harvested acre in 1955 was about 90 pounds larger than in 1954.

With production outstripping disappearance, the carryover has increased each season since the post-World War II low of 2.3 million bales on August 1, 1951. The carryover next August 1 will be equal to more than a year's disappearance at levels of the recent past. As the carryover has increased, stocks held by the Commodity Credit Corporation have also increased. On November 10, 1955, CCC held record post-World War II stocks (owned and held as collateral against outstanding loans) of 10.4 million bales. This compares with 8.1 million bales on August 1 and 7.7 million bales on November 11, 1954. Net entries into the 1955 CCC loan were 2,352 thousand bales on November 10, compared with 762 thousand into the 1954 loan about a year earlier.

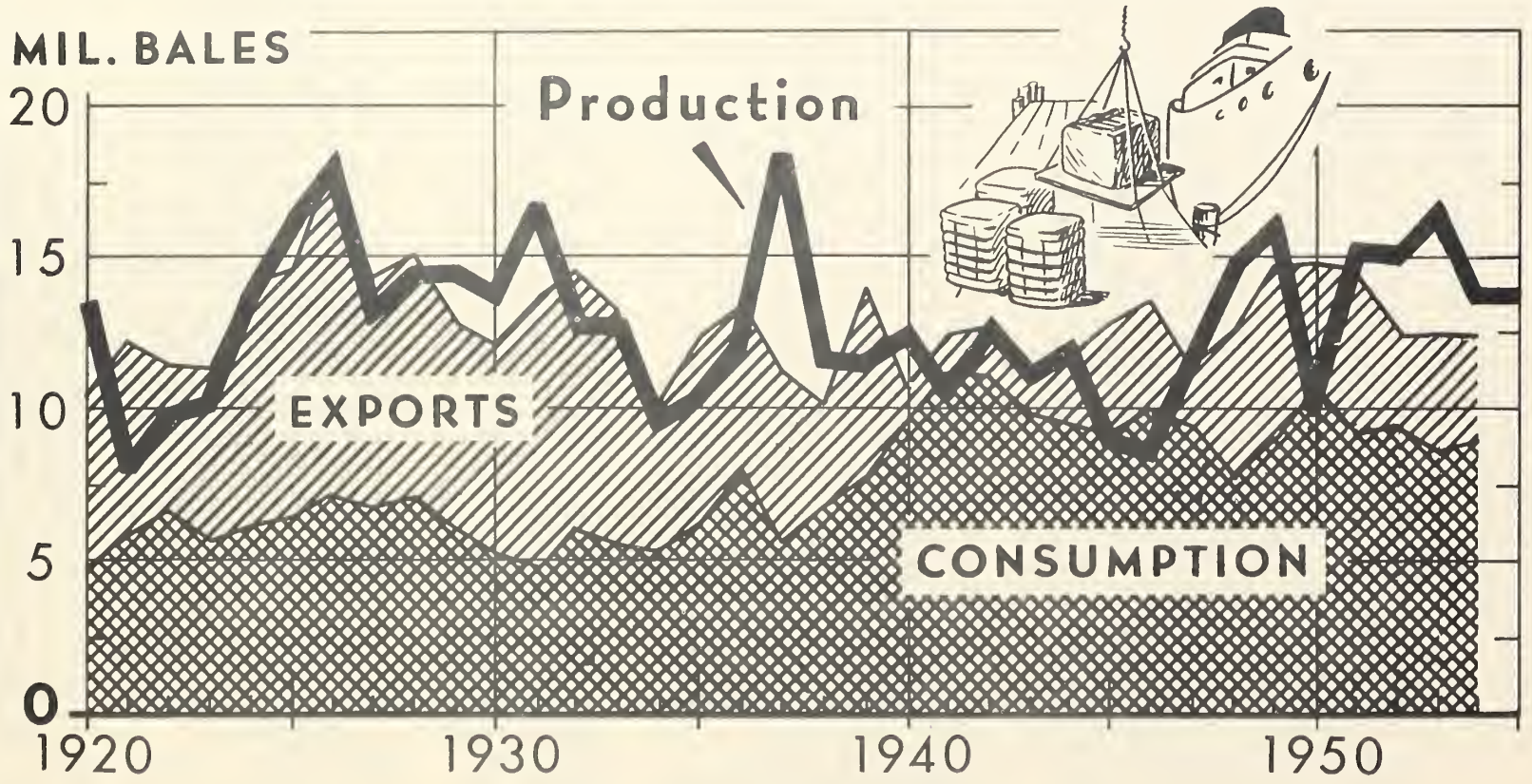
During the past two marketing years disappearance of cotton in the United States has been 12.3 and 12.4 million bales. However, during the 1955-56 season disappearance will probably decline to less than 12 million bales. Although domestic mill consumption is expected to be larger than the 8.8 million bales of 1954-55, exports probably will be considerably smaller than the 3.4 million bales of that season.

Domestic mill consumption of cotton in 1955-56 probably will be about 9.2 million bales, approximately 5 percent larger than in 1954-55. The average daily rate of consumption during the first 3 months of the current season was about 6 percent above the same period a year earlier. However, the rate of consumption during February-July 1956 is expected to be close to that of a year earlier. The increase in cotton consumption is being caused primarily by a high level of economic activity. Another indication of larger consumption is the relatively small stocks of broad woven goods in relation to unfilled orders held by mills at the end of August.

Cotton consumption per person has tended to decline during the post-war period, as shown in figure 3. At the same time the consumption of manmade fibers per capita has tended to increase. Although cotton consumption per person in 1955 will probably be almost a pound above the

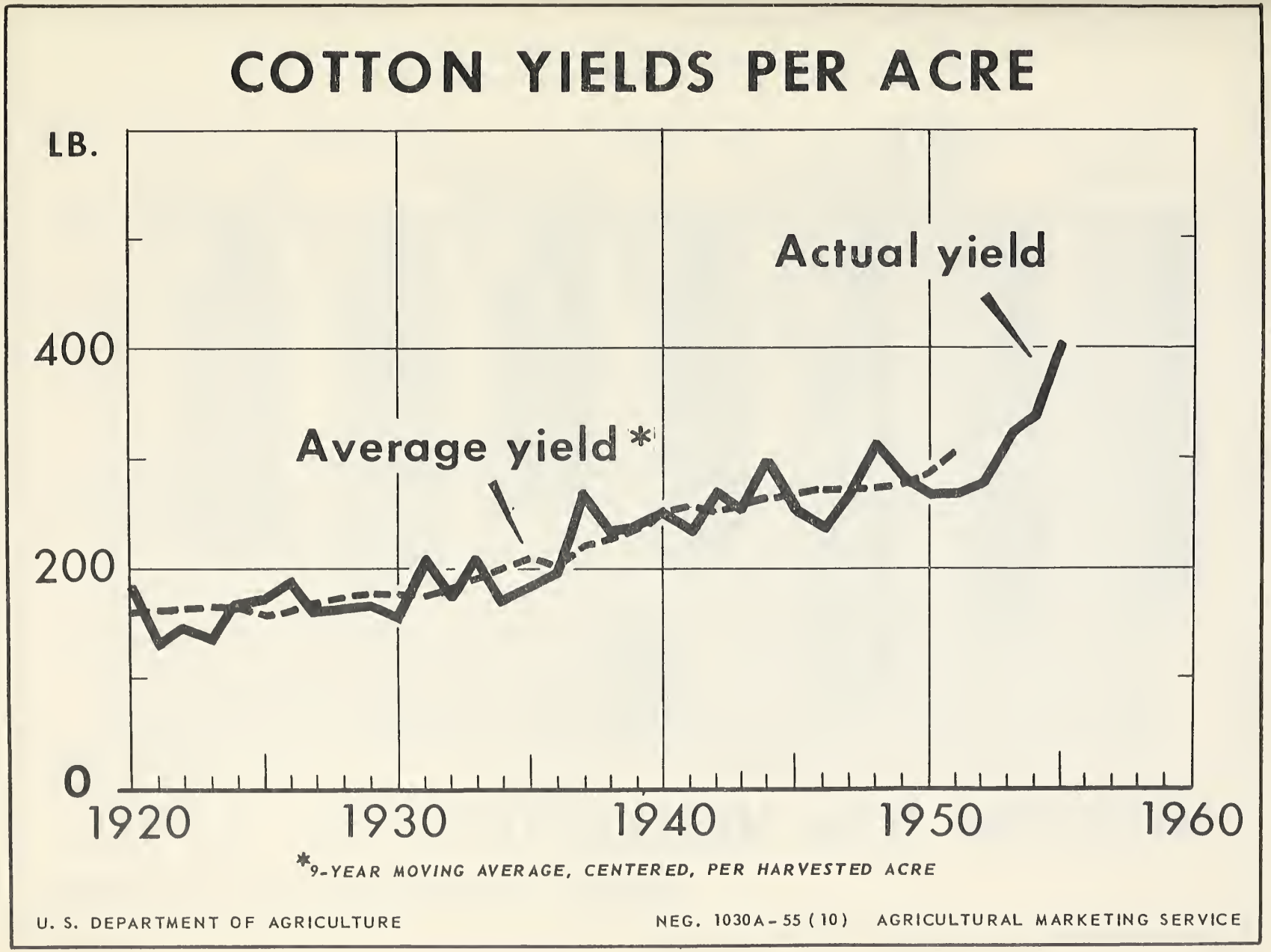
For U. S. Crop

COTTON PRODUCTION RELATED TO CONSUMPTION AND EXPORTS



DATA ARE FOR RUNNING BALES

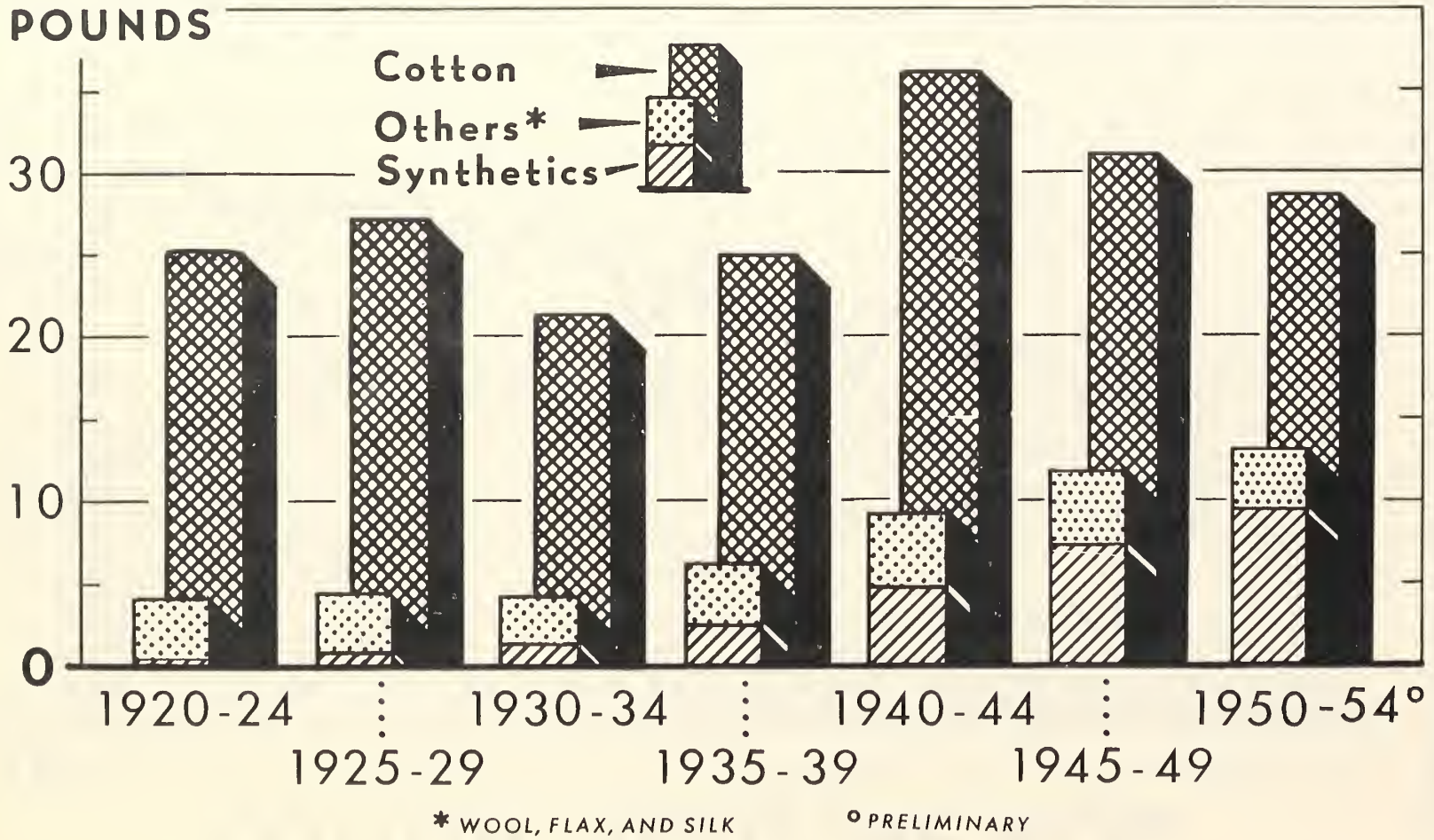
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COTTON YIELDS PER ACRE
LB.
400
200
0
Actual yield
Average yield *
1920
1930
1940
1950
1960
*9-YEAR MOVING AVERAGE, CENTERED, PER HARVESTED ACRE
U. S. DEPARTMENT OF AGRICULTURE
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596

Natural and Synthetic Fibers

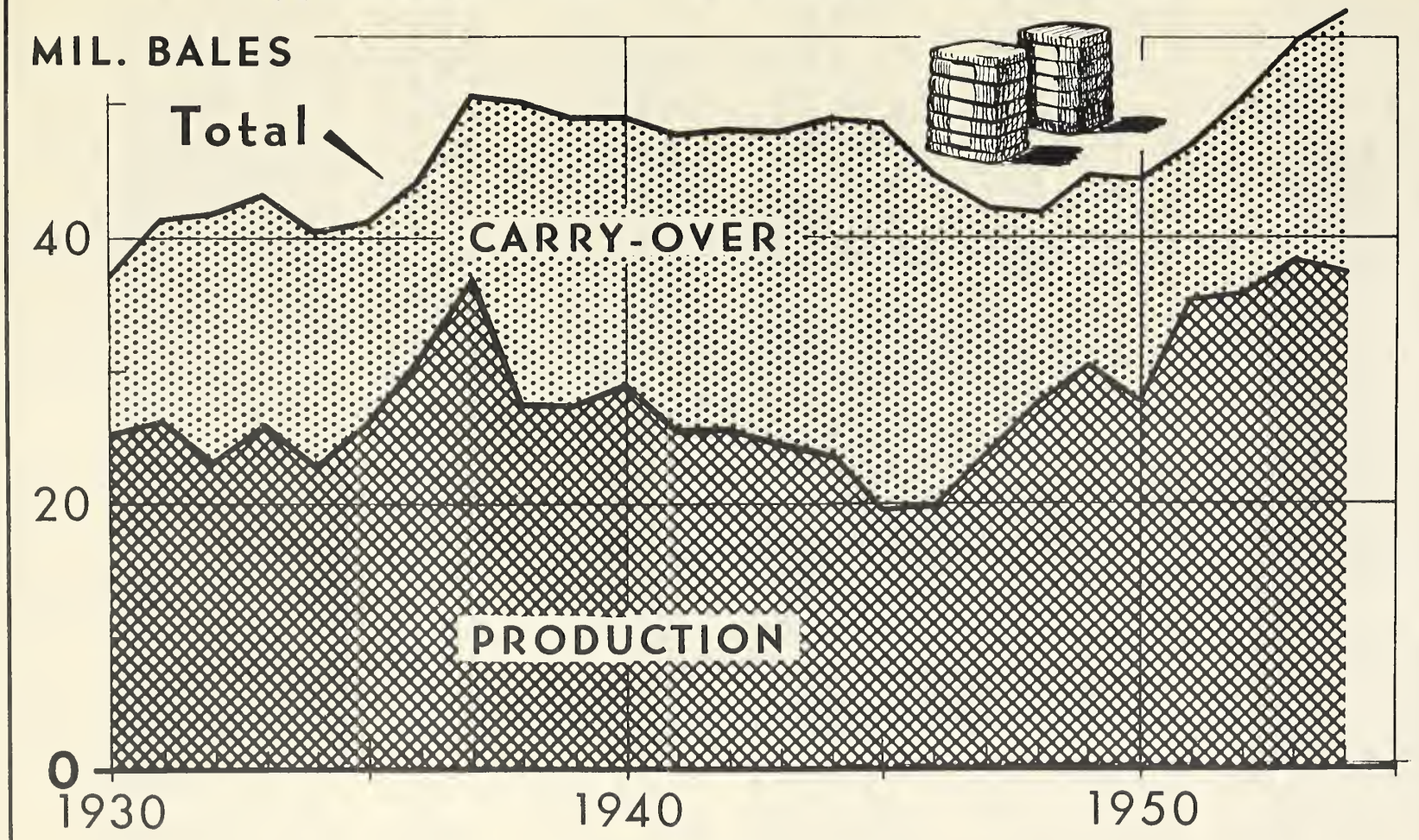
FIBER CONSUMPTION PER PERSON



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NEG. 498-55 (3) AGRICULTURAL MARKETING SERVICE

WORLD COTTON SUPPLY



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postwar low of 25.4 pounds for 1954, manmade fiber consumption is expected to increase to a record high of about 11.2 pounds. This is 1.4 pounds above the previous record high of 1950 and about 2 pounds above 1954. The increases in consumption of manmade fibers are occurring principally in rayon staple fiber, high tenacity rayon yarn, and in the non-cellulosic fibers. Rayon staple fiber competes with cotton principally in apparel and household uses and high tenacity rayon competes in industrial uses. Both of these types of rayon are cheaper than cotton. The non-cellulosic fibers are somewhat more expensive than cotton but on a utility basis their prices are not as much above cotton price as appears on the surface.

The decline in cotton exports is being caused by increasing production of cotton and synthetic fibers abroad, and the leveling out in foreign cotton consumption. Larger production has been caused in large part by the relatively high price of American cotton. As shown in figure 4, the world supply of cotton reached a record high in 1954-55 and the supply in 1955-56 is expected to be even larger. The increase in world supplies has been in progress for several years. As the world supply of cotton has increased, the U. S. share of the world export market has declined, as shown in figure 5.

Foreign free world cotton production in 1955-56 is estimated to be about a million bales above the previous postwar high of 1954-55. Consumption in the foreign free world during the current season is expected to be only about 2 million bales smaller than production. Net exports to iron curtain countries and the U. S. probably will increase foreign free world requirements by about another 0.3 million bales.

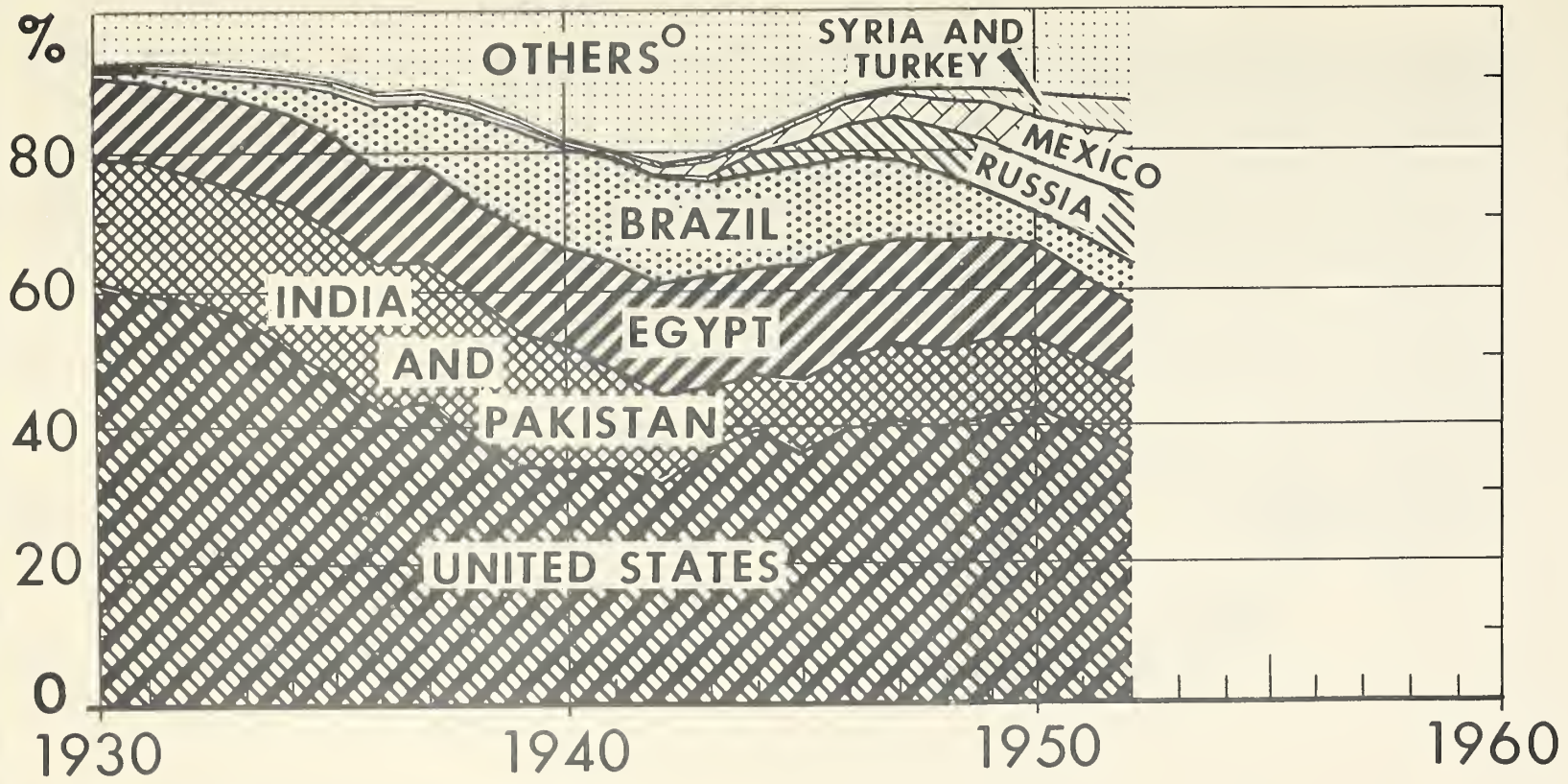
If most of the million bales of 15/16 inch and shorter cotton which the CCC will offer for sale under its special export program on a competitive bid basis is actually shipped, foreign free world stocks may increase by about 400,000 bales and U. S. exports may be close to 2.7 million bales. If the foreign free world does not increase its stocks of cotton, U. S. exports probably will be even smaller, perhaps less than 2.5 million bales.

Funds committed by the U. S. government to finance cotton exports in the 1955-56 fiscal year totaled about 341 million dollars as of November 19. If used, these funds will finance the export of about 1.8 million bales. In 1954-55 about 1.5 million bales were exported under such financing.

During August-October 1955, the average price for Middling, 15/16 inch cotton at the 14 spot markets was below the average loan rate of 33.75 cents per pound at these markets. As the entries into the CCC loan increased, the price also increased and on November 17, it was 33.71 cents. In the past when the supply of cotton has been large in relation to disappearance, prices received by farmers for cotton have remained close to the loan level, as shown in figure 6. This was true in the prewar years and for the two seasons immediately preceding the current one. It is also true of the current season to date.

EXPORTS OF COTTON

By Specified Countries as % of Total*



5-YEAR MOVING AVERAGES CENTERED

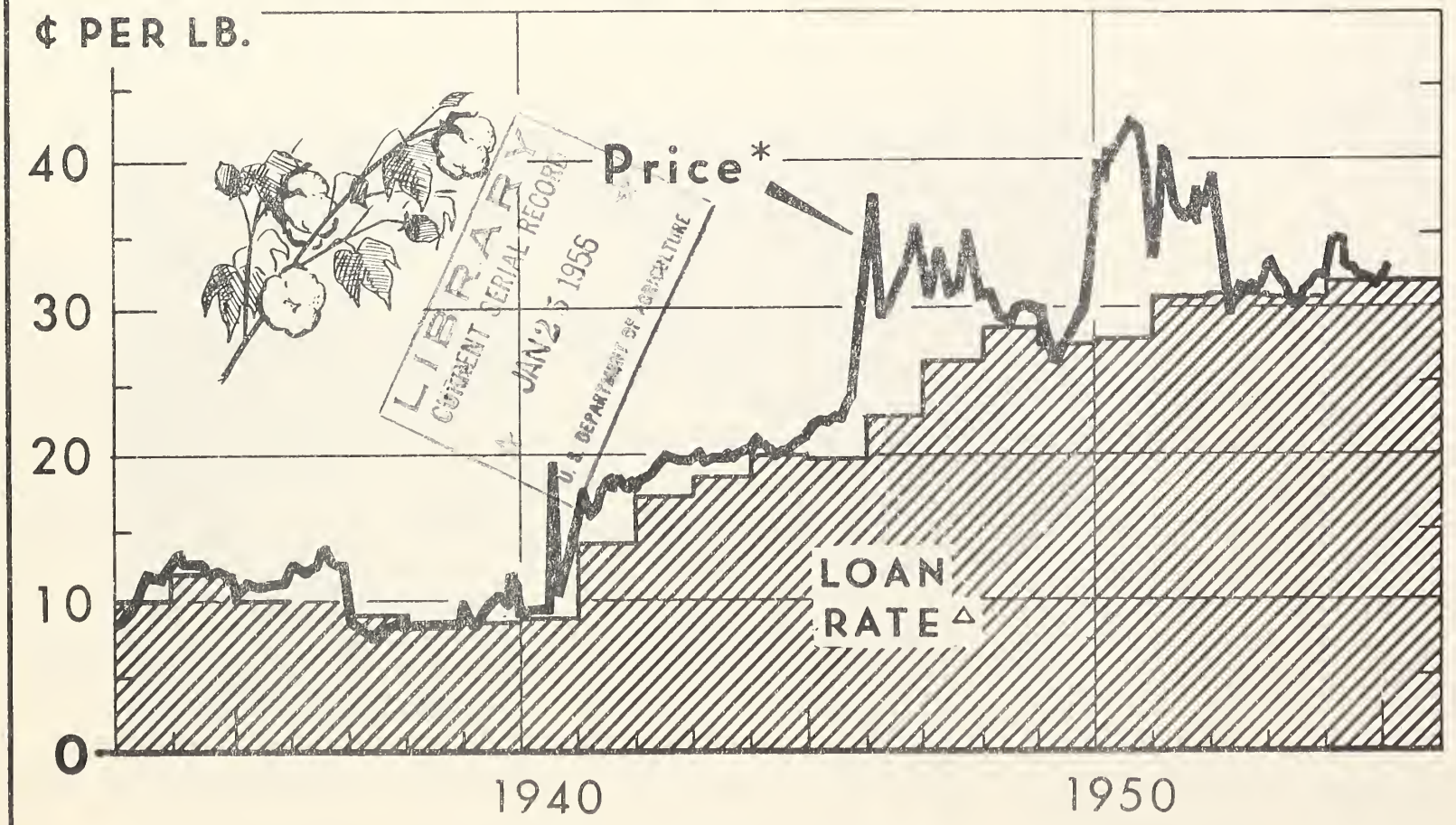
**FOREIGN COUNTRIES INCLUDED HAVE ACCOUNTED FOR 93% OR MORE OF FOREIGN PRODUCTION SINCE 1940*

°OTHERS INCLUDE ANGLO-EGYPTIAN SUDAN, ARGENTINA, BELGIAN CONGO, CHINA, IRAN, PERU, BRITISH EAST AFRICA

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COTTON PRICES AND LOAN RATES



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BY MONTHS, YEAR BEGINNING AUGUST

* AVERAGE PRICE RECEIVED BY FARMERS

△ BASIS MIDDLING 7/8-IN. STAPLE, AVERAGE LOCATION

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

THE OUTLOOK FOR FEED IN 1956

Statement presented by Malcolm Clough, at the
33rd Annual Agricultural Outlook Conference,
Washington, D. C., November 29, 1955

The outstanding feature in the outlook for feed for the coming year is the very large supply of feed grains and other concentrates. The total feed concentrate supply, which has been at a generally high level since 1948, increased another 9 percent from 1954-55 to 1955-56. This year's supply of 197 million tons is larger than in any previous year, either in total or per animal unit. The increase from last year was about equally divided between larger carryover and larger production. The 1955 crop of feed grains was 10 percent above the 1949-53 average and second only to 1948. Carryover stocks have increased during the past 3 years to a record level this year, nearly double those of 1952. Supplies of feed concentrates have totaled over 165 million tons in each of the past 8 years, whereas prior to 1940 they never exceeded 140 million tons.

While we have had a series of generally favorable growing seasons, there are a number of other developments which have had a bearing on currently big feed supplies. (1) The upward trend in yields of feed crops over the past 25 years, particularly for corn, has materially increased the output per acre of land. (2) The total acreage of feed grains has increased 12 percent since 1953 as land diverted from wheat, cotton, and other crops under acreage allotment has been planted to feed crops. (3) Stocks of feed grains have been accumulating under the price support programs. Practically all of the increase in stocks from 1952 has been in stocks under loan or owned by CCC. These stocks made up about three-fourths of the total carryover this year. (4) Finally, efficiency in livestock production through technical developments in livestock feeding are making possible increased production of livestock and livestock products per ton of feed consumed, especially for some types of livestock.

Livestock numbers have been increasing with increasing feed supplies, but at a slower rate. The prospective supply of feed concentrates per animal unit for 1955-56 is 7 percent larger than last year and a little above the previous record of 1949-50. While feed supplies per animal unit have trended upward, the rate of feeding per animal unit has barely been maintained. If we assume a rate of feeding per animal unit in 1955-56 about the same as the 1949-53 average, the total feed concentrate supply would be sufficient to meet our total requirements and leave a carryover into 1956-57 a little above the record carryover this year.

Agriculture - Washington

These recent developments have a bearing on the feed situation in 1956-57 and to some extent in later years. Feed grain acreage is expected to be maintained at a high level again next year. With the big carryover stocks in prospect, total feed concentrate supplies are expected to continue above average in 1956-57, and with normal growing seasons, to remain large for the next few years.

Our big feed supplies this year are well distributed over the country. Large crops of corn and other feeds were produced in most of the Southern States, where supplies were very short last year. Total feed grain supplies are again above average in the North Central region, although drought cut corn production well below average in some of the Western Corn Belt States.

The total corn supply for 1955-56 is estimated at about 4.2 billion bushels, 8 percent above last year, and larger than in any previous year. While the 1955 crop was only a little above the 1949-53 average, record stocks totaling 1,024 million bushels were carried over on October 1. This big carryover included about 850 million bushels under loan or owned by CCC. The "free" supply, which excludes these "Government" stocks, totals around 3,350 million bushels, about 200 million bushels more than the "free" supply last year. More corn, however, is expected to go under price support from this year's crop than from the 1954 crop. This year's supply appears sufficient to meet total 1955-56 requirements and leave a larger carryover at the close of the season.

Supplies of oats, barley, and sorghum grains are much larger than average, as acreages seeded to these grains have increased sharply in the past 2 or 3 years and carryover stocks reached record levels this year. The oats supply is 12 percent larger than last year, the barley supply 15 percent larger, and sorghum grain about a third larger. Although heavy utilization of these grains is in prospect for 1955-56, these big supplies are expected to result in still larger carryover stocks at the close of the 1955-56 season.

Supplies of high-protein feeds for 1955-56 are moderately larger than last year both in total and per animal unit. Most of the increase is in soybean meal. The big 1955 soybean crop is expected to yield about half a million tons more soybean meal than the 5.7 million tons produced in 1954-55.

Feed prices have been declining during the past year or so, and we are going into the 1955-56 feeding season with prices of feed grains and high-protein feeds substantially lower than a year earlier. Prices received for feed grains in October were 21 percent lower than in that month last year and wholesale prices of high-protein feeds were down 12 percent. The decline in prices paid by farmers for all feeds purchased has been less pronounced, averaging only 9 percent lower. Feed prices this year are influenced by the big feed supplies, lower support prices for feed grains, and the large quantity of corn not eligible for price support.

Feed prices are expected to average lower than a year earlier, at least through this fall and winter. Last year there was practically no seasonal rise in feed grain prices from the fall to the spring months. High-protein feed prices were fairly stable from October through February in 1954-55, then declined about 10 to 15 percent in the last half of the feeding season. Some seasonal increase in feed prices may occur later in the current feeding year which, by next spring, would narrow the gap between prices this year and a year earlier.

Corn prices have declined more than seasonally since July, and in recent weeks have been at the lowest level since the fall of 1949. Prices of oats and barley have strengthened since August, and in October average prices received by farmers were only a little below the 1955 support prices. While these two grains were unusually low relative to corn last summer, they are near average relative to corn this fall.

Corn prices have been below the national average support level during the past 3 marketing years. The mid-October price of $1.14 per bushel was 31 cents lower than a year earlier and 44 cents below the 1955 support level. Lower corn prices reflect the bigger 1955 crop and also the fact that many producers in the commercial area have again over-planted their acreage allotments and are not eligible for price support. The percentage of farmers complying with their 1955 acreage allotments, however, is considerably higher than in 1954. It is estimated that around 950 million bushels of corn in the commercial area are eligible for price support, compared with about 720 million last year. With more corn eligible and with prices lower, the quantity of corn placed under price support is expected to be larger than in 1954-55. The 259 million bushels of 1954 corn placed under support was much smaller than in the two preceding years, reflecting the smaller crop and the fact that only about 30 percent of the corn in the commercial area last year was eligible for price support.

The hay supply for 1955-56 is larger than in any past year and 4 percent larger than in 1954, but only slightly above average in relation to the forage-consuming livestock on farms. Supplies are much better distributed over the country this year than in 1954. Large supplies are again available in the North Central region and supplies in the South are about a fifth larger than the very short supplies in that area last year.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

THE OUTLOOK FOR FOOD IN 1956

Statement presented by Harry Sherr at the 33rd
Annual Agricultural Outlook Conference,
Washington, D. C., November 30, 1955

On an overall basis, the food situation for next year closely resembles that of 1955. Supplies in general are expected to continue abundant, and sufficient for civilian consumption of food in 1956 to be maintained at about the present year's per capita rate, which is 13 percent above the prewar (1935-39) average. The high level of economic activity and employment in prospect for next year points to a record flow of income to consumers. This will likely be reflected in the continuation of a strong demand for food in 1956. However, with large supplies available, retail food prices probably will average close to that indicated for 1955, with variations for individual items during the year reflecting mainly seasonal changes in supplies.

Looking at the demand side first, the record high level of consumer incomes expected for 1956 indicates some increase over this year in per capita expenditures for food. On a percentage basis, however, these expenditures probably will account for about a fourth of spendable income, as it has in recent years. For the most part the expected increase in the amount of money spent for food per person next year will be for the more expensive and highly processed foods rather than for more food in general or due to higher prices.

The longtime trend in demand for processed food has been upward, and the number of new food products coming into the domestic market to meet this demand has been increasing, particularly in the past decade. The uptrend in demand for these foods is due to many factors in addition to the level of income consumers receive. Important among these factors are the shift of the population from farm to nonfarm areas, improvements in the food distribution process, the more uniform quality and the convenience in use of processed foods, and the general availability of these foods throughout the year at relatively stable prices. At present our statistics on production and consumption of processed foods are not as complete as we would like to have them. Some of the surveys which have been made or are being planned by the Department of Agriculture are expected substantially to increase our knowledge in this area.

Now let us look at the food supply prospects for next year. In general, record or near-record supplies are expected to be available for distribution. We will be starting the new year with a large number of livestock on farms and heavier supplies of feed at lower prices than at

the beginning of 1955. For meat this means that total production probably will be at or even slightly above the record quantity indicated for 1955. However, if prospective output is measured on a civilian per capita basis, it may be a little smaller next year because of the expected increase in population. Whether total meat production next year is the same as or exceeds that of this year will depend on output after mid-1956. Supplies will be up from a year earlier this coming winter and spring mainly because of the larger pig crop this fall; the number of cattle on feed this January 1 probably will be about the same as a year earlier, but could be marketed for slaughter at a somewhat faster rate. The quantity of meat available in the second half of 1956 will depend on farmers' decisions for farrowings of spring pigs, and for maintaining or reducing the size of their cattle herds. The composition of the meat supply will likely be a little different next year, with a moderate increase for pork at least offsetting a possible small decline for beef and veal.

Supplies of the other livestock products will also be very large next year. Milk production on farms in 1956 is expected to exceed by 2 billion pounds or more the record output of over 124 billion indicated for the present year. The prospective increase will reflect continuation of the longtime upward trend in production per cow, since the number of milk cows and heifers on farms at the end of this year probably will be no larger than a year earlier. Thus, even with stocks likely to be much smaller next January 1 than last, supplies of dairy products probably will be plentiful throughout the year both in total and on a per capita basis. For the poultry products, "plentiful" and "record" or "near-record" are also appropriate adjectives to use in describing the supply prospects for next year. Compared with 1955, more poultry meat--both chicken and turkey--is expected to be available in 1956 and about as many eggs.

Now about food from crops. The large carryover stocks of food grains from earlier harvests plus the 1955 crops assure a continued abundance of cereal products. We now have enough wheat to cover fully our anticipated food and nonfood needs and exports through mid-1957 even if we do not harvest a single bushel of this grain in 1956. This example represents an extreme situation. Our supplies of rice and grains other than wheat, although substantial, are by no means as large relative to the expected demand for these items. Edible vegetable oils--which are used to make such products as margarine, shortening, mayonnaise, salad dressings and cooking oils--are expected to continue plentiful throughout most of next year. In addition to the vegetable oils, there will be plenty of butter and lard.

At this time we can look ahead at most about 6 months for fruits and vegetables, even less for some of the fresh commodities. Supplies of the processed fruits--that is, the canned, frozen or dried items--to about midyear are up some from a year earlier but those of the processed vegetables are almost the same. Stocks of a few of the processed products

may run a little low, temporarily, before the new packs move to market during the second half of 1956. More fresh apples, pears, and grapefruit are indicated next winter and possibly early spring than last. The total supply of oranges from now till about mid-1956 is about the same as a year earlier, but the volume marketed for use in the fresh form during the coming months will depend on how much is used for processing into frozen and canned juice, particularly the former. For fresh vegetables, supplies this winter will depend mainly on weather. An increase for some winter-season vegetables is already indicated by the slightly larger acreages planted. Also, prospects are that imports of fresh vegetables this winter will be up some from the low level of a year earlier.

More coffee will be available in 1956 than this year and at retail prices probably averaging no higher. World production of coffee in 1955 was much larger than in 1954, and our imports of this commodity through next spring are expected to continue at a higher level than a year earlier. The world production potential for coffee has been on the up-trend in recent years and, barring unfavorable weather, probably will continue expanding in the next 5 to 10 years. This reflects the large scale planting of coffee trees in many countries since the end of World War II and improvements in cultural practices.

Food purchases by U. S. military agencies for use by our troops are expected to be about as large as this year, but exports will likely be somewhat lower. Food exports will be comprised mainly of commodities like wheat and rice, which are in surplus supply.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Household Economics Research Branch

THE OUTLOOK FOR CLOTHING FOR 1956

Address by Vincent E. Covins, Prices and Cost of Living Division, Bureau of Labor Statistics, U. S. Department of Labor, at the 33rd Annual Agricultural Outlook Conference, Washington 25, D. C., Tuesday, November 29, 1955

Any discussion which will attempt to develop the outlook for clothing for the coming year must consider what the markets will offer the consumer and how much it will cost him.

The consumer is immediately made aware of any changes in the usual situation relative to the kinds and supplies of clothing through changes in prices. It then becomes appropriate to discuss prices first. However, before making an estimate for the coming year, a brief review of the recent past may be in order.

The aftermath of war with its dislocations is inflation. The period following World War II was no exception. After the end of the war and with the lifting of controls clothing prices rose sharply. They then fell from their immediate post-war highs as supplies and inventories became balanced with demand.

Following the outbreak of hostilities in Korea prices of clothing and materials from which they are manufactured peaked in 1951. The expectations of heavy demands for equipping a large armed force, which would in turn create shortages similar to those which existed during the previous war period, drove prices sharply upward. Prices for many commodities reached higher levels than during the war period. When the fear of inadequate supplies proved groundless prices began to drift downward. By the third quarter of 1955, clothing prices, as measured by the Bureau of Labor Statistics indexes, are about 5 percent below their 1951 peaks. It is important to note that this 5 percent decrease does not restore prices to their pre-Korea level. Compared to March 1950 current wholesale and retail prices are from 5 percent to 8 percent higher.

This decline in prices has not been uniform for clothing classified by fiber content. Retail prices for cotton clothing are about 3 percent lower than in 1951. Prices for wool clothing are about 5 percent lower. Prices for rayon and nylon clothing, because of the constantly expanding production of fabrics of man-made fibers, have experienced a much greater decline of about 11 percent. In contrast, retail prices for footwear, have declined only 1½ percent.

NOTE: Opinions expressed in this paper are those of the author and do not necessarily represent the position of the Bureau of Labor Statistics or the U. S. Department of Labor.

Primary market and mill prices for the raw materials and fabrics from which clothing is made have undergone greater changes since 1951 than the clothing of which they become a part. As the amount of processing imparted to a commodity is increased its price structure becomes more complex and more resistant to price change. This is illustrated in the following paragraphs which outline the differential price movements of raw materials, and fabrics and intermediate supplies with those for the completed garments.

Prices of domestic wool used in the manufacture of apparel early in 1951 were 142 percent above their 1947-49 average. By the fall of 1955 their prices declined over 65 percent from their 51 level and are now 10 percent below their 1947-49 average. Wool fabric prices over the same period have declined by about 27 percent or less than half of the decline for wool. In contrast, the price performance for wool in the form it reaches the consumer has been much more stable. For example, manufacturers' prices for women's untrimmed coats currently are only 4 percent less than in 1951. This moderate decline reflects, to some considerable degree, the practice which prevails practically throughout all branches of the apparel industry, of manufacturing to historical, rigid, price brackets or "price lining." Due perhaps to competition at the store level, the retail prices of women's coats over the same period have declined over twice that amount, about 10 percent. The decline in prices for men's suits likewise has not matched that of raw wool and fabrics. Manufacturers' prices are currently about 10 percent lower and retail prices about 5 percent lower than in 1951.

In the cotton group there is a closer relationship between the price for raw cotton and for fabrics. Since 1951 the price for raw cotton has declined about 25 percent. The price for unfinished print cloth is currently about 35 percent lower than in March 1951 and that for percale, another traditional indicator, about 25 percent lower. However, prices for completed cotton garments have been relatively stable over this same period. Typical are prices for housedresses at the manufacturers' level which have fluctuated within a narrow range since their 1951 peak and which are currently only slightly below it. At the retail level their prices are only 4 percent lower. Both manufacturers' and retail prices for men's shirts are about 2½ percent and 5 percent lower than in 1951 and the broadcloth from which they are made is about 15 percent lower. Denim from which overalls are made has declined 17 percent since 1951, while manufacturers' prices currently are about 11 percent less and retail prices about 7 percent less.

The differentials in price changes for raw materials, and completed garments of man-made fiber origin are not as marked as for those of natural fiber. Man-made fiber prices are currently only 3 percent lower than in 1951 in contrast to the 65 percent decline in raw wool prices and the 25 percent decline in cotton prices. This stability is due to the fact that man-made fibers are produced by a relatively few large producers and production can be adjusted to demand. Prices for women's rayon dresses for example have shown little change since 1951. However, this stability is due to quite another reason. Dresses are subject to the same price lining practices as women's coats previously referred to.

Prices for fabrics of man-made fibers have declined about the same amount, 25 percent, as have wool and cotton fabrics because they are directly competitive for many end uses.

Retail prices of women's nylon hosiery are currently about 18 percent lower. This accounts for much of the decline in the rayon and nylon clothing group referred to earlier.

In leather products there likewise exists different rates of price movements between raw materials, intermediate materials and the end products. Prices for hides and skins, the raw materials for leather, have declined 55 percent since 1951 and are currently selling at 38 percent of their 1947-49 average. Today's leather prices are 37 percent lower and factory prices for shoes have declined 8 percent since 1951. Retail shoe prices are only slightly lower than at their peak in 1951.

Against this background, where are we today, and what can we expect in 1956? During the latter half of 1955 prices for textiles and piece goods from which clothing is made have firmed and moved to somewhat higher levels. There has been little change in manufacturers' prices for clothing generally, but for some articles such as work clothing, increases have already been made effective. A number of shoe manufacturers have also increased prices. One of the large mail-order firms has just announced that its spring 1956 prices will be about 2 percent to 3 percent higher.

A recent canvass of informed sources in the market indicates that the price picture for 1956 will shape up as follows:

Women's and Misses Coats and Suits—prices will be stable and unchanged from current levels regardless of any increased costs of materials and supplies because of high production and competition.

Women's and Misses Dresses—their prices will be strong and firm with some increases in the low quality category in which increased production costs cannot be absorbed. Generally, because the industry practice of producing garments to fit into predetermined price brackets, much of any real price movement will be concealed.

Blouses and Sportswear—no increases above current levels are anticipated. Higher costs of materials will be offset by a continued high rate of production of this type of apparel.

Women's Hosiery--prices will be unchanged from current levels.

Cotton Sox and Anklets—price increases may be effective for all categories in this group. Industry spokesmen have said that current mill price are below break-even levels and that higher prices must be obtained.

Gloves--price increases are expected. Current prices are unduly depressed because of lower demand and low priced imports.

Handbags--prices will be higher due to increased production costs, primarily labor costs.

Footwear--higher prices are in store. Producers of women's popular price shoes announced increases of about 25 cents per pair during their recent show. The two largest producers in the midwest recently announced increases of 25 to 50 cents per pair. This means that prices to the consumer may be increased by as much as $1.00 to $1.50 per pair this spring. However, some industry men predict a break in prices after the first quarter of '56. They believe that the current record rate of production will result in a surplus and an excessive inventory which will have to be disposed of at lower prices.

Girls Wear--prices will be firm with some increases from current levels, particularly for cotton items such as dresses and slips.

Infants Wear--higher prices due to increased production costs are forecast. Price increases are more readily passed on to the consumer in this segment of the apparel industry since it operates on the principal that grandma will pay any price for baby's needs.

Men's and Boys' Furnishings--little if any price change is expected in this area. There may be some increases in prices for popular quality grades of underwear chiefly through the elimination of multiple-unit prices.

Men's Clothing--there is pressure for higher prices but it is doubtful that any increases can be made effective. This segment of the apparel industry is currently emerging from a relatively depressed period and is concerned that any sizeable price increases may set up an unfavorable reaction and that the present volume will suffer. Most manufacturers have brought out their spring 1956 lines with no increases in prices.

The estimates for 1956 listed in the preceding paragraph were made with the assumption that the general qualities of clothing produced by manufacturers and found in retail stores next year will be the same as those currently available. These estimates do not take into account any disappearance of present qualities. Consumer demand, prompted by continued high employment and wages, may force the stocking of higher qualities with significantly higher price tags.

The estimates are also made with the assumption that production will be adequate for all purposes. Currently the supplies of the principal natural fibers, raw cotton and raw wool, are ample to meet any foreseeable requirements. Man-made fiber production, of course, can be gauged to existing demands. The raw material for leather is a by-product of the meat industry.

Cattle slaughter is expected to continue at a high level in 1956 and the needed supplies of raw-stock for leather will be provided. With ample quantities of raw materials assured the supply of clothing for 1956 is directly related to the productive capacity of the textile, apparel and associated industries. All indications are that this capacity will be more than able to meet consumer needs and demands.

During World War II the capacity of these industries was expanded, during a period when they were forced to compete with armament manufacturers for every essential, including labor, for producing their product. Facilities were expanded to the point where they were able to furnish apparel and equipage for the largest armed force ever put into the field by this nation, meet our essential civilian needs, and provide much of the textiles and apparel for our allies and their dependent civilian populations. This was a prodigious feat. Since then this capacity not only has been retained, but has been further added to and has undergone constant modernization and improvements.

Over the past several years the production of textiles and apparel has been above the average of 1947-49 except for a short period in 1951 and for about 12 months beginning in the latter part of 1953. Immediately after Korea production increased about 8 percent in anticipation of expanded demand. Then fell 16 percent within the next year as supplies and stocks of all kinds proved more than adequate. Climbed 16 percent again in 1952-53, and reversed this trend in the latter part of 1953. Between June and December of that year production declined almost 20 percent to a post-Korea low. Since then it has been steadily rising and, in 1956 a new record level may be reached. The production of shoes and slippers reached record levels in 1955. Estimates for the first half of 1956 indicate that this record may also be surpassed.

The estimates that 1956 production will surpass current substantial totals have been made giving consideration to the following:

Inventories of completed articles of clothing are believed to be low to normal with no excesses to be worked off.

That there is a normal pipeline supply at all stages of processing and production from mill to cutter-up to retailer.

That current production is in balance with demand. With demand for clothing indicated as steadily rising, production is likewise expected to increase above current levels.

An important factor always present in the supply situation is the position of man-made fibers. Their production and supply can be increased or decreased at will in contrast to the relatively long term production cycle required for natural fibers. The utilization of man-made fibers has been steadily increasing. Many believe that their use will be further extended and total supplies of desirable fabrics increased through the greater use of blends of man-made fibers with each other and with natural fibers.

Fabrics of natural and man-made fibers, and the clothing made from such fabrics are generally highly competitive. The exception, of course, is when that made of man-made fiber proves so vastly superior for a certain use so that it almost completely eliminates the use of the natural fiber. An example is the almost complete disappearance of silk hosiery for women caused by the introduction of nylon. This competition has been often referred to as the "battle between the fibers."

Today, the textile industry is concentrating on the blending of the various man-made fibers with each other and with natural fibers. This "marriage of fibers" is referred to by many as the most significant happening in the textile field in many years. By mixing and blending the natural fibers of cotton, wool and silk with the cellulosics, rayon, orlon, Dacron or Acrilon, and the various man-made with each other, it is producing fabrics that have the particular advantage of each fiber contained in them.

The combinations which are being produced are almost endless and some have already achieved a considerable degree of consumer acceptance. The reasons for this become evident if we break down some of these blends and identify the properties given the fabric by each of the several fibers of which it is made.

One of the most used man-made fibers in blending is Dynel. In suitings made of rayon-acetate-Dynel each fiber contributes to the fabric as follows:

Rayon adds - Moderate strength
- Economy
- Ease of dyeing
- Easy ironability

Acetate adds - Economy
- Crease retention
- Wrinkle resistance

Dynel adds - Crease and shape retention when fabric is either wet or dry

In wool-Dynel suitings—

Both	- Contribute warmth
Wool adds	- Easy ironability
	- Wrinkle resistance when dry
	- Traditional hand
	- Ease of garment manufacture
Dynel adds	- Crease retention-wet or dry
	- Shape retention-wet or dry
	- Abrasion resistance without piling and without sewing difficulties
	- Wrinkle resistance at all degrees of humidities
	- Strength

In cotton-nylon-Dynel Dress Goods—

Cotton adds	- Economy
	- Easy ironability
Nylon adds	- Abrasion resistance
	- Resistance to shrinkage
Dynel adds	- Wrinkle resistance
	- Lofty handle
	- Resistance to shrinkage
	- Some shape retention

In cotton-Dynel underwear fabrics—

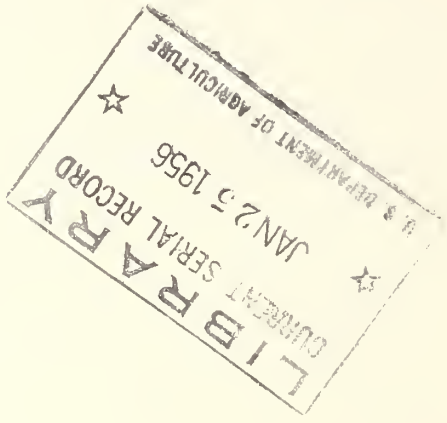
Both contribute	- Softness
	- Original warmth
	- Strength
	- Comfort
Cotton adds	- Absorbency
	- Easy ironability
	- Economy
Dynel adds	- Lasting softness and loft
	- Shrink resistance
	- Shape retention

The blending of Dacron and wool to produce a light weight fabric for men's summer suits is an example of the successful marriage of fibers. Of this years sales, suits made of Dacron and worsted blends accounted for 26% of the total.

The 65 percent Dacron and 35 percent cotton fabric, which requires little ironing may prove to be a new staple fabric for use in shirts, blouses, lingerie and pajamas. It is already well established in the men's shirt field.

The Orlon-Dynel pile fabrics with a fur-like appearance for women's coats have caught on. This seasons production is expected to exceed 300,000. Garments of this fabric are said to have warmth without the excessive weight of some furs, to be resistant to spots and stains, and to have a soft luxurious appearance combined with the tough wearing qualities found in acrylic fabrics.

In summary, the outlook for clothing in 1956 is favorable. Supplies will be ample. The consumer will be offered a greater choice of garments made of fabrics designed and engineered, through the blending of man-made and natural fibers, to be more durable, more comfortable, and more easily cared for. Prices will be slightly higher on the average for all clothing combined. Some weakness in prices for certain kinds made of the older staple man-made fibers may develop but curtailed production will keep prices from falling by any great amount and significantly affecting the average.


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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

THE DOMESTIC BUSINESS OUTLOOK

Talk by Nathan M. Koffsky
at the 33rd Annual Agricultural Conference
Washington, D. C., November 28, 1955

Over the past year there has been a steady improvement in economic conditions which has spread to most sectors of the economy, except agriculture. We expect further gains in the economy as a whole in 1956 with some increases from current record rates of employment and incomes. But with many sectors of the economy now close to capacity levels, we should not expect as much gain over the next year as we have had in the past year. Nor should it be surprising if the very high demands in some sectors such as business inventories, residential building and automobiles which have contributed greatly to economic gains over the past year, should level off.

The business boom has exceeded our expectations of last fall. National output--as measured by the Gross National Product--increased almost 33 billion dollars, or 9 percent between the third quarter of 1954 and the third quarter of this year. This is close to three times the rate economists have come to consider "normal" economic growth. We have moved from a troublesome unemployment situation of over 3 million persons without jobs to about 2 million - not much more than the minimum that can reasonably be expected with a mobile population and labor force. Moreover, this has occurred in the face of the sharpest influx into the labor force - over 1 1/2 million persons, mostly women - since demobilization of the armed forces after World War II. In manufacturing the work week has lengthened and productivity per man hour has increased more than usual over the past year.

Increased output has been sufficient in total to meet sharply expanding demands at fairly stable prices. But there have been some inflationary tendencies in metals, machinery, construction materials and in consumer services such as medical and personal care. In contrast, prices of agricultural commodities have declined. Both the BLS index of urban consumer prices and the AMS index of prices paid by farmers are at about the same levels as a year earlier, with lower prices for food and other farm products offsetting increases elsewhere. In recent months, the BLS index of wholesale prices has been slightly higher than in 1954, with rising prices of some industrial commodities overbalancing declines in agricultural commodities.

What have been the sources of demand that have shaped the economy over the past year and affect the economic outlook for 1956? The table below summarizes the increase in the flow of expenditures which occurred in the economy between the third quarter of 1954 and the same quarter of 1955, and indicates the major sources--consumers, business and government--from which those demands arose:

Agriculture-Washington

Gross National Product
Third quarters 1954 and 1955
(Seasonally adjusted annual rates)

	Third quarter 1954 Bil. Dol.	Third quarter 1955 Bil. Dol.	Change from 1954 Bil. Dol.
Gross National Product	358.8	391.5	+32.7
Personal consumption expenditures	237.9	256.0	+18.1
Durable goods	29.4	37.2	+ 7.8
Nondurable goods	121.5	127.0	+ 5.5
Services	87.0	91.8	+ 4.8
Private investment	45.2	59.8	+14.6
Residential construction	14.2	16.7	+ 2.5
Non-residential construction	14.3	16.1	+ 1.8
Producers' durable equipment	22.2	25.1	+ 2.9
Change in business inventories	- 4.9	2.4	+ 7.3
Net foreign investment	- 0.7	- 0.5	+ 0.2
Government purchases of goods and services	75.8	75.8	.0
Federal	47.7	45.5	- 2.2
National Security	(42.1)	(40.6)	(- 1.5)
State and local	28.1	30.2	+ 2.1

U. S. Department of Commerce
Totals may not add due to rounding

First it is clear that expanding consumer demand was by far the most important element in the economy over the past year. Expenditures for consumption goods and services increased some 18 billion dollars, accounting for over half of the total gain in economic activity. Adding in also, expenditures for residential construction accounts for almost two-thirds of the increase over last year. Expenditures for durable goods, especially automobiles, made the largest gain--over a fourth. Increases of 5 percent for nondurables, including food, and 6 percent for services were more in line with the 7 percent growth in consumer income, after taxes.

Thus, consumer expenditures in total have risen more over the past year than consumer incomes. The rate of saving out of disposable income has declined to the lowest level since the scare buying that followed the Korean outbreak. The use of consumer credit has expanded sharply and the total credit outstanding at the end of September was a record high - up more than 5 billion dollars over September 1954. Nearly 4 billions of the increase was

for purchases of automobiles. Total consumer credit outstanding was higher in relation to consumer incomes than ever before.

Even with population up again about 2.8 million persons over the year, per capita purchasing power increased 5 percent, the largest gain in 5 years.

One final note on the role of the consumer in the present boom. There was no recession in consumer expenditures in 1954 when business and government expenditures were trending down. In fact with a stable income situation in that period, consumer expenditures rose steadily, finally sparking the turnabout in the business inventory situation in the fourth quarter of 1954 and in business capital investment in the first quarter of 1955.

Turning now to the investment sector, we see that expenditures in this category increased about a third between the third quarter of 1954 and the third quarter of 1955. The increase in this sector accounted for the rest of the total gain in the economy. About half of the increase in investment reflected the sharp change in the business inventory position. A year ago business inventories were being liquidated at the annual rate of close to 5 billion dollars a year. In the most recent quarter, business inventories were being accumulated at a rate close to 2 1/2 billions a year. Thus, the total swing in the inventory position from negative to plus was over 7 billion dollars. Despite the fact that business inventories have been built up so far this year, the increase has amounted to less than 3 billion dollars over the year. Total business sales have risen almost 7 billions so that stock-sales ratios are generally lower than a year earlier and substantially lower than in 1952 or 1953.

Expenditures for new residential construction have increased some 18 percent over the past year. New home building received a substantial stimulus last year from longer credit terms and low down payments. The rate of new nonfarm housing starts early this year was about at a record - a rate of over 1.4 million units on an annual basis. Since then some tightening in credit for new homes has been reflected in a decline in the rate of starts to about 1 1/4 million units - not much different than a year earlier. Mortgage credit on nonfarm family properties has increased to a new record high - more than 15 percent over the past year.

Other private construction outlays, especially for commerical and industrial facilities, which began to move up in the first quarter of this year, have risen about 13 percent from third quarter 1954 to third quarter 1955. Farm construction this year apparently is running somewhat under last year. Part of the increase in construction expenditures - both residential and non-residential - reflects higher construction costs. The Department of Commerce index of construction costs shows an increase of about 4 percent over the past year.

Along with expansion in new plants, business investment in new machinery also increased about 13 percent over the past year. There has been a broad expansion in this segment in which most major sectors - manufacturing, transportation, and public utilities have participated. Here again, prices have

risen about 4 percent, according to the BLS wholesale index of machinery prices. Farm purchases of tractors and other farm machinery have increased substantially over a year ago, when they were very low.

No significant change came out of our transactions with foreign countries. With boom conditions both here and abroad, our commercial exports and imports in the most recent months reported ran some 12-13 percent over a year earlier. On balance, and taking into account shipments under the Mutual Security Program and the flow of private funds abroad, the net contribution of our international transactions to economic activity is now not much different than a year ago.

Finally, it should be noted that total government demand for goods and services (including Federal, State and local governments) did not change over the year. There was a slight reduction in the rate of purchases for national security purposes - but only by 4 percent as compared with a drop of 20 percent between the third quarter of 1953 and the same quarter of 1954. Most of the reduction in the past year occurred by the end of 1954 and defense outlays have held stable since then. National Security activities now account for a little more than 10 percent of the Nations' total economic activity compared with almost 12 percent a year earlier and 14 percent at the same time in 1953. Over the past year, there was some reduction also in other federal expenditures.

State and local government expenditures continued to rise by some 2 billion dollars - much the same annual increase that has occurred in previous years in the postwar period. A good part of this increase was for schools, highways and other public construction. The increase in State and local government outlays offset the decline from the Federal government.

What are the demand prospects over the year ahead? In the past year, expanding demands have come from the private sector of the economy, primarily from consumers. Total government demands were practically unchanged.

Over the next year again, changes in the level of government demands are likely to be small - and probably not a decisive factor in establishing the overall trend in the economy one way or the other. Federal outlays, according to the budget review a few months back may be a little smaller in the current fiscal year than in fiscal 1954-55. National security outlays have been stable so far this year, and pending a real change in the international situation are likely to continue so for some time ahead. With higher tax receipts reflecting improved economic conditions, and lower expenditures, it is now anticipated that the Federal Budget will be about in balance this fiscal year. State and local government expenditures will most probably continue on the upward trend which has added 2 billion dollars or so each year since the end of the War. According to a very recent estimate prepared jointly by the Departments of Labor and Commerce, public construction outlays are expected to average some 10 percent higher in 1956 than in 1955.

The same set of estimates looks for slightly lower outlays for residential construction next year than this year - but not much different than the rate in the third quarter of 1955. New housing starts in 1956 are indicated at about 1.2 million units, slightly under the third quarter rate. This reflects, according to the report, some decline in starts in early 1956 resulting from the recent tightness in mortgage funds and less favorable terms of payment. While there may be some further decline in housing starts over the months immediately ahead, expenditures are likely to hold up reflecting the trends toward larger and better equipped homes, more additions and alterations on existing homes, and some increase in construction costs.

We have two very favorable indications on business investment in new plant and equipment next year. The Labor-Commerce report indicates expenditures for private non-residential construction in 1956, some 7-8 percent larger than this year. Further, the McGraw-Hill Survey of business plans for capital spending in 1956, released two weeks ago, reports an intention to increase spending for new plants and equipment by 13 percent over 1955. This is the largest increase in planned capital outlays since 1951. Most industries indicate large increases with investment intentions up 30 percent in manufacturing, 27 percent in railroads and 10 percent in the commercial sector. Mining and electric and gas utilities spending may show some decline. Very large increases are planned in the Iron and Steel and the Auto industries. While the investment picture is very favorable indeed we need to point out that a fairly substantial increase has already occurred and that the third quarter rate was probably close to 5 percent higher than the 1955 average will likely turn out to be. Further, part of the projected increase in outlays undoubtedly reflects the fact that construction and equipment costs are rising.

Perhaps the biggest question mark in the investment sector relates to the volatile business inventory sector. There are historical precedents--such as in 1948-49 and again in 1953-54--that inventory accumulation over a 12 to 18 month period leads to some liquidation. The swing, as noted in the recent period, can have significant impact on the trend in economic activity. Yet the current accumulation which has gone almost a year has been very moderate and total inventories have not yet been brought into line with higher sales. The inventory build-up can continue at about the current rate without bringing a period of liquidation in 1956. But we should not expect the stimulus to the economy again from inventory build-up which we have had in the past year.

The international trade position also should continue much as at present. Economic activity abroad is at very high levels and shows no sign of weakening. We can expect some further rise in our total exports. Similarly with a strong economic situation here, our imports may also increase. Again, the net change from this year should be negligible.

So far our analysis has suggested that total government and private investment demands will rise some over the year ahead. Turning now to the biggest source of demand - the American Consumer - prospects are also

favorable for some expansion. Consumer incomes continue to rise at a rate in excess of 1 billion dollars a month, reinforcing and expanding the total level of consumer demand. This does not necessarily mean that the consumer will buy more of everything. For example, it may well be that the same number or fewer automobiles will be purchased in 1956 than the record of about 7 1/2 million cars this year. But this was 2 million more than were purchased in 1954. Rising incomes will now support a higher rate of purchases than in 1954. But some of the stimulating effect of easy installment credit, stretching over 3 years or even more, heavy trade-in discounts and style changes will likely be lost over the next year. Further, repayments on auto loans are rising to the level where, in the course of a year, they will come close to matching credit extended, even if current sales are maintained. This suggests a slower rise in consumer credit outstanding. Also there may be some increase in the saving rate from the current level. Even if fewer autos are purchased over the next year - by no means a certainty-- expenditures will be down less. List prices are higher and more equipment is going into the car, raising the average price per car delivered. American living standards, in terms of the volume of goods and services purchased per person, have risen almost 50 percent in the last 15 years and the advance shows little sign of abating.

While it is difficult to find much potential expansion in consumer demand for durable goods over the next year, demands for food and other nondurables and for services should continue to rise. Note again that consumer expenditures for other things than the durables increased more than 10 billions over the past year compared with an increase of 8 billions for durable goods.

In summary, total demands in the economy, from consumers, business and government, are expected to increase moderately over the year ahead - but not as much as in the past year. The rise should be sufficient to absorb the normal amount of new entries into the labor force without significantly increasing current low levels of unemployment. The productivity of the economy should enable higher demands to be satisfied at fairly stable prices again. But some price increases in the industrial segment should be expected. A demand increase again as large as we have had over the past year could well bring strong inflationary pressures.

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THE OUTLOOK FOR POTATOES AND SWEETPOTATOES IN 1956

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Statement presented by Will M. Simmons at the
33rd Annual Agricultural Outlook Conference,
Washington, D. C., December 1, 1955

POTATOES

With a continued high level of employment and record income in prospect for 1956 a subject which has been covered in considerable detail by previous speakers--consumer demand for potatoes in the year ahead is expected to be as strong as in 1955. However, the demand for potatoes is inelastic and the heavy supplies from the 1955 late crop States probably will weigh on the market into the spring.

The difficulties experienced in moving the large 1955 crop and the relatively low prices in prospect into next spring may discourage farmers from planting as large an acreage to potatoes in 1956 as in 1955. But it should be remembered that potato production is highly concentrated in the hands of commercial growers with the facilities and technical "know-how" for handling the crop. Further, the shift of production to high yielding areas is still going on. It seems to me that under such conditions, the danger in the coming year is not that production will be cut too drastically, but that production may again exceed normal market requirements.

Yields of potatoes in 1955 were considerably above those of 1954, but only moderately above the yields in several other recent years. The early commercial crop was up about 15 percent from that of 1954, with increased acreage and higher yields in California being the dominant factor. Then, despite some unfavorable weather, yields in each of the 7 intermediate States were above those of the previous year and in most States were above the average of recent years. Last, but by no means least, the indicated production in the 29 late States is 15 million bushels larger than in 1954, with all of the increase in the eastern and western regions. The larger production was due to some increase in acreage in the late States and to higher yields, particularly in Maine, Idaho, and California. In the central States, on the other hand, average yields were well below those of a year earlier and indicated production of late-crop potatoes in that area is considerably less than in 1954 and below average. More than half of the reduction in output occurred because of much lower yields in North Dakota.

On the price side, the first part of the 1955 season was encouraging. Despite the large early potato crop, prices during the first 5 months of 1955 averaged above the corresponding months of 1954. During this period marketings from the various areas were well timed and there were few serious market gluts. Also the late March Freeze and some drought damage in the Southern late spring potato States resulted in price strength from late winter into May. But plentiful supplies and the prospect of a large summer crop subsequently began to weigh on market prices. Prices declined sharply during the summer and producer representatives requested that the Department of Agriculture take steps to assist the industry in disposing of supplies of 1955 crop potatoes in excess of market requirements.

Agriculture - Washington

On September 15 the Department put into effect a potato diversion program, under which growers receive supplementary payments for potatoes diverted into starch, flour, or livestock feed. So far Maine, Colorado, Idaho, Oregon, Washington and parts of California have been approved for participation in the program. Through the week ending November 19, over 4 million bushels of potatoes had been diverted to starch and another 161,000 bushels to livestock feed. In addition to the diversion program, several of the important producing areas are operating under Federal marketing agreements and companion marketing orders which contain certain specified size, grade, and quality restrictions pertaining to the marketing of tablestock potatoes from those areas. An estimated 40 percent of the total 1955 potato crop and about half of the late crop production is covered by Federal marketing orders.

Despite the industry efforts to move the big crop as rapidly as possible, stocks of potatoes on January 1 are apt to be larger than a year earlier. Further, indications are that growers in Florida will have a larger acreage of potatoes for winter harvest. It all adds up to the likelihood that prices into next spring will remain below those of a year earlier. Barring unfavorable weather, producers must make at least a moderate cut in the acreage of potatoes for spring harvest and in the acreage in the late States, if prices to growers in the last three-quarters of 1956 are to be materially above the low levels of a year earlier.

SWEETPOTATOES

Supplies of sweetpotatoes available into mid-1956 will be much larger than during the same period a year earlier. All of the increase in production over that of 1954 was due to higher average yields as 1955 acreage was down slightly. However, acreage was up in several of the larger producting States--namely, Louisiana, North and South Carolina, Virginia and California.

The 1955 crop of sweetpotatoes is estimated at 36 million bushels--the largest crop in 5 years and 20 percent larger than the small 1954 crop. Large supplies from the 1955 crop depressed the market and on September 15, United States average prices received by farmers stood at $1.42 per bushel. This was the lowest mid-September price since 1942. During the following several weeks prices stayed depressed and in early November the Department of Agriculture put into effect a purchase program to assist growers in disposing of the large supplies. Before the program really got under way, market prices strengthened somewhat and so far very few purchases have been made under the program.

The demand for sweetpotatoes into mid-1956 is expected to be at least as strong as in 1955. Prices are expected to rise seasonally this winter and into spring. But with the heavier supplies of sweetpotatoes in prospect, prices during the next 6 to 7 months are expected to average well below the levels of a year earlier.

The lower prices for the 1955 crop and the heavy labor requirements for planting and harvesting, probably will discourage farmers from planting any larger total acreage to sweetpotatoes in the coming year. However, acreage may again be increased in some of the States having the greatest relative advantages in sweetpotatoes or in those having the least attractive alternative opportunities. It appears that unless yields are very high, fewer sweetpotatoes will be produced in 1956 than in 1955.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Household Economics Research Branch

ESTIMATING MONEY SAVINGS AND TIME COSTS OF HOMEMADE COTTON DRESSES 1/

Talk by Margaret L. Brew, Head, Household Management Section
at the 33rd Annual Outlook Conference, Washington 25, D. C.,
Tuesday, November 29, 1955

Home sewing has long been regarded as one way in which the homemaker could add to the economic welfare of the family. In recent years, however, many questions have been raised as to the relative advantage of this home-making activity. Home economists are asked such questions as "How much is saved by sewing at home?" or "Could time be spent more profitably on activities other than home sewing?"

To provide a first step in measuring money saved by sewing at home, home economists in the Agricultural Research Service of the United States Department of Agriculture experimented with procedures for estimating money and time costs of home-produced clothing. The work so far has been on a small scale and is exploratory in nature. If further work were to be done, procedures would no doubt be modified in the light of what we have learned so far. Because of the many factors involved, including some that are not economic, this pilot study was not expected to deal with all aspects of the question. And because no two families are in exactly the same situation, estimates for individual homemakers could give different conclusions as to the advantages gained by sewing at home.

Essentially the project was one of constructing in our laboratories, under conditions roughly comparable to those encountered in homes, garments similar in style and construction to garments purchased ready-to-wear, comparing the money costs of the two and determining the time used in making the garments. The times recorded were the actual working time, excluding interruptions. The experiment covered cotton housedresses and street dresses.

1/ This is a preliminary report of a joint project of the Household Economics and Clothing and Housing Research Branches, under the supervision of Margaret L. Brew, Suzanne Davison, and Margaret Smith. The statistical analysis was done by Carol Jaeger.

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Housedresses

Housedresses were chosen for the first part of the experiment since it was found in our surveys of family clothing supplies that they were one of the garments most frequently made at home. We decided to select from the ready-to-wear housedresses available on the market a small number in the price range commonly bought. Because it was not feasible for us to sample the market as a whole, we chose dresses priced by the Bureau of Labor Statistics for its Consumer Price Index. In pricing, the BLS follows specifications developed from studies of the purchasing practices of urban wage earners and clerical workers. The stores chosen for pricing are those catering to persons in this group. Admittedly, then, this project is geared to the urban moderate-income homemaker, which many of you extension specialists tell us is a part of the group you serve. For farm homemakers we might need to consider a different market.

In April 1954, five styles of ready-to-wear housedresses were purchased in a large Eastern market. The dresses were bought in two of the more common sizes--14 and 20--to determine if size made a difference in either the money savings or in the time of making.

After examining the styles of commercial housedress patterns available in the same market, we decided that it would not be possible to make dresses from commercial housedress patterns that would be even reasonably similar in style or construction features to those found in the ready-to-wear dresses. The commercial patterns differed from the ready-to-wear housedresses in that they generally called for set-in sleeves, cuffs, and slide fasteners, they were less likely to call for pockets, and extensive trimming.

We decided, therefore, to develop this part of the experiment along two lines: First to make dresses in the laboratory which duplicated as closely as possible those purchased ready-to-wear, and second to construct dresses from commercial housedress patterns.

Homemade housedresses duplicating the ready-to-wear.--In order to duplicate the ready-to-wear dresses, an extra set of each style was purchased to provide patterns for the dresses to be made in the laboratory. The dresses were ripped apart and patterns were made from the pieces using standard pattern paper and entering markings similar to those found in a commercial pattern. 2/ The time used in preparing these simulated commercial patterns was not counted in the time spent in making the dresses.

2/ The dresses ripped apart also provided materials for the laboratory testing of breaking strength, color fastness, etc.

The fabrics available in yard goods departments of stores priced by BLS which came closest in quality and design to those in the ready-to-wear dresses were 39¢ 80-square percales, the lowest priced printed percales regularly sold in these stores. Laboratory analysis of such characteristics as yarn count, shrinkage, weight, and color fastness did not show them to be very different from the fabrics in the ready-to-wear dresses. The trimmings and findings obtainable on the market in most instances were judged from eye inspection alone to be a better quality than those used in the ready-to-wear housedresses, particularly so in the case of buttons. If standards for matching colors of buttons to other parts of the homemade dresses had been lower, lower-priced buttons in some instances could have been purchased.

Every effort was made to duplicate in the homemade dresses the type and quality of construction found in the ready-to-wear. Width of seams and hems, seam and hem finishes, order of construction, and type of trimming were matched as closely as possible. However, the specialized equipment used in garment factories permits certain types of finishes and trimmings that cannot be duplicated by the homemaker. Therefore, while the dresses made in the laboratory are not exact copies of those purchased ready-to-wear, they are as close as it was possible to make them using typically home-owned sewing equipment.

The time and money cost comparisons of the ready-to-wear and the homemade housedresses are presented in Table 1. The costs of fabric and findings are quoted to the nearest purchasable amount. This procedure assumes that the excess findings and fabrics purchased would be a total loss to the homemaker. Except for thread, a small cost item in the account, this assumption is probably correct in most instances. If the small amounts of leftover fabrics and extra buttons were used for other purposes, their money costs could be deducted and the money costs of the garments made at home would be decreased slightly. Power costs for running the sewing machine and heating the iron were estimated.

Included in the cost of the copied dresses are estimates of the cost of a commercial pattern, even though commercial patterns were not purchased. An alternative procedure would have been to add the time spent in preparing a pattern from a basic pattern, draping, or adapting one or more commercial patterns to the styles desired.

Table 1.--Money and time costs of five cotton housedresses, duplicates of housedresses purchased ready-to-wear

Type of expenditure, time spent, and fabric yardage, by size of housedress	Housedress model					Aggregate for five house-dresses
	H_1	H_2	H_3	H_4	H_5	
Ready-to-wear, retail price 1/dollars	2.98	2.99	3.29	3.98	3.99	17.23
Duplicate constructed in laboratory:						
Direct money cost of size 14: 2/						
Fabric (incl. fabric trim)...do..	1.27	1.43	1.22	1.42	1.53	6.87
Trimming 3/.....do..	.34	.23	0	.04	.10	.71
Belts 4/.....do..	0	0	0	.29	.18	.47
Fasteners (buttons).....do..	.20	.10	.30	.20	.20	1.00
Thread.....do..	.16	.16	.16	.16	.08	.72
Pattern (estimate).....do..	.35	.35	.35	.35	.35	1.75
Power (estimate).....do..	.02	.02	.02	.02	.02	.10
Total direct money cost: 2/						
Size 14 5/.....do..	2.34	2.29	2.05	2.48	2.46	11.62
Size 20 5/.....do..	2.44	2.29	2.05	2.58	2.46	11.82
Time spent: 6/						
Size 14.....hours	1.6	1.6	1.3	1.4	1.4	7.3
Size 20.....do..	1.7	1.6	1.4	1.5	1.5	7.7
Fabric yardage:						
Size 14.....yards	3-1/4	3-2/3	3-1/8	3-1/4	3-1/4	--
Size 20.....do..	3-1/2	3-2/3	3-1/8	3-1/4	3-1/4	--

1/ Ready-to-wear dresses were purchased in April 1954.

2/ Prices of materials and trimmings pertain to April-May 1954.

3/ Includes rickrack, piping, bias tape, cording, and tabs.

4/ Includes belt or belt buckle and backing.

5/ Different colored fabrics were used in the replications of the same sizes and in different sizes. In order to get a good match in color between fasteners and fabrics, some fasteners were purchased at higher prices than those quoted here.

6/ Derived from two observations per garment and adjusted for learning.

Indirect costs have not been included. We have assumed that the family would own a sewing machine if only for mending, that it would own an ironing board and iron, and that the depreciation on these items accountable to the construction of a single garment would be negligible. Nor have the costs of owning such accessory equipment as pinking shears, buttonhole attachment, or a zigzagger been included even though such items cannot be considered as an ordinary or usual part of household equipment. For this estimate, it has been assumed that their use extends over many years and many garments are made with such equipment so that the average cost for each garment is very small. If a satisfactory basis for estimating these equipment costs had been available they would have been included. No attempt was made to assign some of the costs of housing, including room space and upkeep, to the costs of the homemade dresses. For this analysis, it was assumed that these costs would have been incurred whether the dresses had been made at home or not.

The time required to make the housedresses by the laboratory technician varied from 1.3 hours to 1.6 hours for a size 14, and slightly more for a size 20. This worker was an experienced seamstress. We do not know how many homemakers would be able to equal or better such a record. The inexperienced sewer, or the person who sews infrequently might be far slower.

In substance then, by duplicating a ready-to-wear housedress in the price range of roughly $3-$4, under the conditions described here a homemaker could expect to show a potential saving in direct money costs of anywhere from $0.64 to $1.53 for a size 14, slightly less for a size 20 (table 1). If overhead costs were included, the savings would be less, of course. If she were a reasonably fast worker, she would spend about one and a half hours of working time. She could reduce her money cost by using the same pattern more than once, or by using basic patterns and adapting to different styles, although developing a pattern for each new garment would undoubtedly increase her working time. She would have a dress that was comparable in quality of construction and quality of fabric to the ready-to-wear. Some of the findings, particularly the buttons, would be of better quality than those in the ready-to-wear garment.

Homemade housedresses from commercial housedress patterns.---Five stylos of housedress patterns were selected from those available on the market. These were made in the laboratory using 39¢ percales, the same price fabric as that used in the duplicates of the ready-to-wear housedresses. The construction methods used were those recommended in the directions included in the pattern to the extent that they were available. The pattern layout included with the pattern was followed.

The total money cost of these dresses was somewhat greater than the cost of the duplicates of the ready-to-wear garments made in the laboratory—an aggregate cost of $14.18 for 5 in size 14 as against an aggregate cost of $11.62 (table 2). Fasteners contributed the most to the difference in cost; each of the commercial patterns used called for a slide fastener, while none of the garments purchased ready-to-wear had one. Somewhat more yardage of fabric was used with the commercial pattern, particularly so for the size 20. There was more difference between the size 14 and the size 20 in the dresses made from the commercial patterns than in the duplicate of the ready-to-wear dresses.

It took somewhere in the neighborhood of one-half to three-quarters of an hour more to make the dresses using the commercial patterns than to make copies of the ready-to-wear dresses. The range in time to make the dresses from commercial patterns was 1.8 hours to 2.2 hours; for the duplicates of the 5 styles of ready-to-wear garments the range was 1.3 hours to 1.6 hours.

However, in making the dresses from the commercial patterns, the seamstress was aware that certain of the procedures recommended in the pattern directions, though perhaps simpler to understand and to follow by the less experienced seamstress, were more time consuming than others known to the more expert seamstress. We decided, therefore, to replicate one style to determine if other methods would have yielded shorter time costs. The style selected was the one, in the judgment of one of the project leaders, that would probably yield the greatest time savings through the use of alternate methods. It was found that the replicated style using the alternate methods could be made in approximately 25 percent less time than that style made according to the pattern directions. If other methods had been used for all five of the dresses, the time spent would have been closer to the time required for making the duplicates of the ready-to-wear garments.

If the homemaker's alternatives were to purchase a ready-to-wear housedress in the popular-priced range or to make a housedress using one of the commercial patterns available in department stores and following directions as given, in making the garment at home she would have saved somewhere in the neighborhood of 40¢ to 60¢ and she would have spent somewhere in the neighborhood of 2 hours of her time.

Table 2.—Money and time costs of five cotton housedresses made from commercial patterns

Type of expenditure, time spent, and fabric yardage, by size of housedress	Housedress model					Aggregate for five house-dresses
	HP_1	HP_2	HP_3	HP_4	HP_5	
Dress constructed in laboratory:						
Direct money cost of size 14: 1/						
Fabric (incl. fabric trim)dollars	1.77	1.22	1.47	1.47	1.47	7.40
Trimming 2/.....do..	0	.08	0	0	0	.08
Belts 3/.....do..	.15	.15	.29	.40	.40	1.39
Fasteners (buttons, slide)...do..	.50	.35	.55	.55	.55	2.50
Thread.....do..	.24	.24	.16	.16	.16	.96
Pattern.....do..	.35	.35	.35	.35	.35	1.75
Power (estimate).....do..	.02	.02	.02	.02	.02	.10
Total direct money cost: 1/						
Size 14 4/.....do..	3.03	2.41	2.84	2.95	2.95	14.18
Size 20 4/.....do..	3.12	2.61	3.03	3.19	3.20	15.15
Time spent: 5/						
Size 14.....hours	2.2	1.8	1.9	2.2	2.1	10.1
Size 20.....do..	2.2	1.9	2.2	2.3	2.2	10.8
Fabric yardage:						
Size 14.....yards	3-7/8	3-1/8	3-3/4	3-3/4	3	—
Size 20.....do..	4-1/8	3-5/8	4-1/4	4-3/8	3-5/8	—

1/ Prices of materials and trimmings pertain to May 1955. Cotton yard goods prices were very little different from those a year earlier when the ready-to-wear housedresses were purchased.

2/ Includes bias tape only.

3/ Includes belt or belt buckle, backing, and eyelets.

4/ Different colored fabrics were used in the replications of the same sizes and in different sizes. In order to get a good match in color between fasteners and fabrics, some fasteners were purchased at higher prices than those quoted here.

5/ Same operator as for duplicates of housedresses purchased ready-to-wear. Derived from two observations per garment and adjusted for learning.

Cotton daytime dresses

Cotton daytime dresses were selected for the second unit of work, because this type of dress also is shown by surveys to be among those garments more frequently made at home. Ten styles of these dresses which met BLS specifications for cotton street dresses were purchased in a large Eastern market. These dresses ranged in price from $8.95 to $12.95. An examination of the commercial patterns on the market showed that 5 of these 10 ready-to-wear dresses could be matched reasonably well with respect to style, fabric, and trimming. These 5 were therefore used for the laboratory experiment and the comparison of money and time costs of home sewing. In the judgment of the project leaders, these 5 were a good representation of the total 10 in fabrics, trimmings, and in construction features.

The money costs of the 5 homemade dresses totaled $24.55 less than the 5 purchased at retail for the size 14, or an average of $4.91 (table 3). The time spent in making the dresses ranged from 2.4 hours to 3.3 hours. We have not attempted so far to determine how much the money costs could have been reduced by the use of different pattern layouts, or how much the time costs could have been reduced by the use of alternate construction methods.

Conclusions

Under the conditions of this experiment, it is clear that savings resulted from making housedresses and cotton daytime dresses at home. For comparable dresses in a size 14, the saving averaged approximately $1 for the housedresses and nearly $5 for the street dresses. "Savings" are used here in the sense of "money that would otherwise have been spent."

Interpretation of these findings should emphasize that in such an experiment certain assumptions must be made in order to define a problem that can be studied. By way of summary, the key points to keep in mind as to these assumptions are:

Equipment. It was assumed that the equipment was used enough and over a long enough period of time that the costs prorated to these dresses would be negligible. Equipment used relatively little would add significantly to the cost for single garments.

Skill. It was assumed that the laboratory worker represented the homemaker who has sewing skill, both in terms of ability to make an acceptable product and the speed with which she worked. An unskilled homemaker could not expect an equal return for time spent in home sewing.

Table 3.--Money and time costs of five cotton daytime dresses made from commercial patterns

Type of expenditure, time spent, and fabric yardage, by size of daytime dress	Daytime dress model					Aggregate for five daytime dresses
	D_1	D_2	D_3	D_4	D_5	
Ready-to-wear, retail price 1/ dollars	8.95	10.95	10.95	10.95	8.95	50.75
Dress constructed in laboratory:						
Direct money cost of size 14: 2/						
Fabric (incl. fabric trim)....do..	3.80	2.75	5.13	3.67	4.12	19.47
Trimming 3/.....do..	0	0	.39	0	.08	.47
Belts 4/.....do..	.30	.30	.25	.30	.30	1.45
Fasteners (buttons, slide, snaps) 5/.....do..	.35	.35	.55	.50	.26	2.01
Thread.....do..	.10	.10	.10	.10	.10	.50
Pattern.....do..	.35	.50	.35	.50	.50	2.20
Power (estimate).....do..	.02	.02	.02	.02	.02	.10
Total direct money cost: 2/						
Size 14 5/ do..	4.92	4.02	6.79	5.09	5.38	26.20
Size 20 5/.....do..	5.41	4.21	7.16	5.42	5.62	27.82
Time spent: 6/						
Size 14.....hours	2.4	3.0	2.8	2.9	3.2	14.3
Size 20.....do..	2.4	3.3	3.0	2.8	3.2	14.7
Fabric yardage:						
Size 14.....yards	3-7/8	5-5/8	5-1/8	4-1/8	4-5/8	--
Size 20.....do..	4-3/8	6	5-1/2	4-1/2	4-7/8	--

1/ Dresses constructed in the laboratory and those purchased ready-to-wear are not identical. Ready-to-wear dresses were purchased in June 1954.

2/ Prices of materials and trimmings pertain to June 1954.

3/ Includes embroidered banding and thread for embroidering.

4/ Includes belt or belt buckle, backing, and eyelets.

5/ Different colored fabrics were used in the replications of the same sizes and in different sizes. In order to get a good match in color between fasteners and fabrics, some fasteners were purchased at higher prices than those quoted here.

6/ Same operator as for housedresses. Derived from two observations per garment and adjusted for learning.

Fit. It was assumed that the ready-to-wear dress and the dress constructed from a commercial pattern would fit a normal figure equally well. Alterations, either in the pattern or in the ready-to-wear dress would, of course, affect the calculations. However, to deal with the problem of money savings and time costs for the person who cannot be fitted without alteration would have been an unduly complex problem in an experiment of this kind. To determine the extent to which ready-to-wear garments and garments made from commercial patterns fit a normal figure is a study in itself.

This experiment suggests that the savings are greater on the high-priced garments. This conclusion is supported by market research showing that the cost of materials is a larger share of the sale price of low-priced than of high-priced manufactured clothing. Thus, if a homemaker elects to make at home a garment whose duplicate would sell at a low retail price, the differences between the money costs of the homemade clothing and the retail prices of comparable garments in the ready-to-wear market will be less than if she elected to duplicate a garment at a higher retail price. However, the more costly garments in a wardrobe are likely to be those requiring more skill in making. A homemaker's lack of skill may limit her potential savings from home sewing.

This raises the question as to the basis on which women decide to make clothes at home. Does the homemaker say to herself "If I were to buy a cotton street dress I would spend (let us say) $10, but if I make it at home it will only cost me $5 and I will save $5." Or does she say "I have only $10 to spend on a street dress; if I make it at home I will have a dress that would sell in the store for $20." In both cases the homemaker will have increased the level of living of her family. However, in the first case, she has freed $5 that can be spent either on more clothing or for some other consumption commodity or service. In the second case, though the increase in the total consumption level of the family will be greater, she has confined the increase to the one consumption category.

The money savings from home construction of clothing were substantial in relation to the time spent, under the circumstances of this experiment. However, there is a limit to the potential savings from home sewing. For example, assuming that a homemaker acquired 1 cotton housedress and 1 cotton street dress in a year, which seems reasonable in the light of recent studies of family clothing practices, her saving would be in the neighborhood of $6. Total potential savings, of course, would increase rapidly as more costly garments were included in the calculation.

Interest in calculating potential savings through home sewing will depend upon the homemaker's need to weigh alternative uses of time. If the homemaker has no alternative use for her time, for example, if she sews to fill in time that would otherwise be idle, there is little need to calculate potential savings. Or if sewing is an occupation that she enjoys, she can charge the time up to recreational activities. However, if the homemaker gets no particular pleasure from sewing, and she has alternative uses for her time—whether it be time spent in personal or community improvement such as reading or being president of the PTA or whether it be time spent in other types of household production such as refinishing furniture or gardening—she must decide whether the savings from home sewing are worth the time lost from other activities. An experiment such as this illustrates some of the procedures in assessing different kinds of home production in terms of the contribution they can make to the total welfare of the family.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Washington, D. C.

Outlook and Marketing Information on Livestock: How Extension Workers and Others May Use and Apply It

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If every producer of food were his own consumer, and all families were self-sufficient, there would be no need for outlook and marketing information for farmers.

At one time this was nearly true. It is no longer so. Increasingly, the American farmer produces for commercial sale. His bountiful yields of wheat, fruit, meat, milk, and other items are almost entirely delivered to the market, from which they are distributed to consumers anywhere from the next town to the farthest nation. Last year, products valued at 30 billion dollars were marketed from United States farms. Only 1.9 billion dollars worth of food--merely 6 percent as much--was consumed at home.

Look at it another way. There are 5 million farms in the United States. These 5 million, of which only 3 3/4 million are large enough to be called commercial farms, produce food and other necessaries for a nonfarm population of more than 143 million people, who spend annually about 65 billion dollars for food. In addition, they produce a surplus for sale abroad. No small business, that!

So the first reason why we give thought to economic outlook and marketing information is the immense size and the commercial nature of farm production and marketing.

A second reason is the freedom of choice enjoyed by both the producer and consumer. It is said that we are not a free people, but 165 million dictators. In merchandising of food this is most certainly true. Each housewife, in daily exercising her choice of foods and clothing, gives a direction to production at the farm. And woe to the producer who fails to harken! Moreover, each producer must do his own listening, for he is an independent operator. In the livestock enterprise especially, decisions as to production are individually made and executed. The whole process is a long-distance communication between the individual consumer and the individual producer.

A third and final reason for our need of economic information is the long-run character of farm production. Not only does the farmer make his own management decisions, but in arriving at them he must look far ahead. His decision as to how many cattle to feed, or whether to add more farrowing pens, or how many ewe lambs to hold back, is based partly on his expectations of the future. The farmer is a businessman who is ever planning and investing for a distant and uncertain future.

Agriculture-Washington

Perhaps the item of economic information most often requested of Extension agents is the price forecast. "What do you think the price of hogs will do in the next 12 months?" "Will prices of fat steers hold up long enough for me to put on an extra grade, or had I better let mine go now?" "Will this be a good year to feed lambs?" These are queries often heard.

It is necessary to provide answers to these questions; the farmer needs them. But it is even more important to present background information on which answers can be based. A price prediction shorn of its underlying logic is incomplete and unconvincing. While neither Extension agents nor the farmers they serve can be professional economists, both can make themselves familiar with certain basic economic facts. Just as a price forecast cannot be disjoined from supporting reasoning, so Extension Outlook work cannot be separated from economic education.

Price-making Forces

Demand for Meat

Most livestock producers like to know something about the nature of demand for meat. Meat is almost entirely a domestic commodity. Imports are less than 2 percent of supply. Though exports of meat once were large, now they are small. Exports of byproducts, however, are significant. In 1954, 465 million pounds of lard and 1,162 million pounds of tallow and grease were shipped abroad. And sizable quantities of hides and skins (8 million) were exported. Until recently, hides were usually imported.

Meat is a consumer's good, and demand for meat is closely determined by incomes consumers receive. In 1954, consumers spent 5.4 percent of their disposable incomes for meat. This percentage goes up during inflation, as in 1947 and 1948. It tends to ease off in periods such as the present.

Demand for beef has increased relative to that for pork. Studies show clearly that a shift in favor of beef began to appear in the early 1930's. Some of the weakness in pork demand is traced to broad developments such as more facilities for refrigeration in homes, and movement of population away from pork-eating areas. However, part of the decline in demand reflects a growing distaste for fat pork. Demand for lean pork has held up relatively better. Fat cuts of pork used to sell for as high a price as lean cuts; now they are only two-thirds as high. All this is a supporting plank to the campaign for a meat type hog. And the long-run outlook for returns from hogs depends partly on how successful is the effort to provide consumers the kind of pork they want. Note how economic facts and the outlook are tied together in this question.

Competition between Meats

When the supply of cattle suddenly shot upward 3 years ago, producers asked about the closeness of competition between beef and pork. Soon after, prices for hogs began to increase while prices for steers

were declining, substantiating the statistical evidence that demand for each meat is to a considerable degree independent. A housewife may choose between a rib roast and a pork loin on a given day, but over a week or a month she demands variety. The desire for variety, and the ability to afford it, prevent great substitutability among most foods in the American diet.

Marketing Margins

Livestock producers no longer believe that meat packers are the culprits in every decline in prices for livestock. Neither do they regard the packer as a mere functionary who automatically returns a prescribed portion of the retail price of meat to the producer. Rather, it is known that packers, wholesalers, and retailers are intermediaries between the producer and consumer, and that the marketing charges or margins they receive can vary. Over a long period margins tend to follow trends in cost items, such as labor, transportation and packaging materials. In the short run, though, marketing margins are responsive to market supply and demand conditions, often widening when supplies increase quickly and narrowing when they decrease. Alert producers want to keep informed on margins--to know how well prices for the live steer or hog match those for beef or pork at retail.

Consumption Rate

The size of the current meat supply is a statistic that belongs in the kit of every extension man who works in livestock areas. The number of pounds consumed per person is the simplest measure. Most livestock men know that the supply of beef advanced to an all-time high of 79 pounds per person in 1954. Consumption will be about the same in 1955. Consumption of all meat this year promises to exceed that of last year because of an estimated 6-pound increase in pork; and at an estimated 158 pounds the total will be second only to the all-time high of the fabled year of 1908.

The United States ranks at the top in many things. In meat consumed per person it is sixth. Uruguay led all countries with 248 pounds in 1953, the latest year for which data are available. Australia, Argentina, New Zealand, and Denmark, following in that order, all exceeded the rate in the United States.

Marketing

Reliable information on livestock marketing is greatly in demand. Recent years have seen a relative decline in marketing through terminal markets and an increase in movement through other channels, notably auctions. Is this trend good or bad? What makes a desirable marketing structure? What practices should be encouraged, and which discouraged? How can a farmer get the last 10 cents his animals are worth? Also, would selling by live weight and grade be a preferred system for reflecting consumer preferences for meats back to producers? And how adequate is market information? Can it be improved? These are difficult questions. Frequently the "answers" that circulate are based on inadequate information and may be little more than hunches or preconceptions. Much research is needed to provide more reliable appraisals of the marketing system and more accurate knowledge from which marketing practices can be improved. This area merits an extension man's attention.

Market classes and grades for meat animals and meat

Market group	Class 1/	Grade						
Cattle and calves								
Slaughter cattle	Steer	Prime	Choice	Good	Commercial	Utility	Cutter	Canner
	Heifer	Prime	Choice	Good	Commercial	Utility	Cutter	Canner
	Cow		Choice	Good	Commercial	Utility	Cutter	Canner
	Bull		Choice	Good	Commercial	Utility	Cutter	Canner
	Stag		Choice	Good	Commercial	Utility	Cutter	Canner
Vealers	Steer, heifer, and bull	Prime	Choice	Good	Commercial	Utility	Cull	
Slaughter calves	Steer, heifer, and bull	Prime	Choice	Good	Commercial	Utility	Cull	
Feeder and stocker cattle 2/	Steer	Fancy	Choice	Good	Medium	Common	Inferior	
	Heifer	Fancy	Choice	Good	Medium	Common	Inferior	
	Cow	Fancy	Choice	Good	Medium	Common	Inferior	
	Bull	Ungraded						
	Stag	Ungraded						
Feeder and stocker calves 2/	Steer	Fancy	Choice	Good	Medium	Common	Inferior	
	Heifer	Fancy	Choice	Good	Medium	Common	Inferior	
Beef and veal								
Beef carcasses	Steer	Prime	Choice	Good	Commercial	Utility	Cutter	Canner
	Heifer	Prime	Choice	Good	Commercial	Utility	Cutter	Canner
	Cow		Choice	Good	Commercial	Utility	Cutter	Canner
	Bull		Choice	Good	Commercial	Utility	Cutter	Canner
	Stag		Choice	Good	Commercial	Utility	Cutter	Canner
Veal carcasses	Steer, heifer, and bull	Prime	Choice	Good	Commercial	Utility	Cull	
Calf carcasses	Steer, heifer, and bull	Prime	Choice	Good	Commercial	Utility	Cull	
Sheep and lambs								
Slaughter lambs	Ram	Prime	Choice	Good		Utility	Cull	
	Ewe	Prime	Choice	Good		Utility	Cull	
	Wether	Prime	Choice	Good		Utility	Cull	
Slaughter yearlings	Ram	Prime	Choice	Good		Utility	Cull	
	Ewe	Prime	Choice	Good		Utility	Cull	
	Wether	Prime	Choice	Good		Utility	Cull	
Slaughter sheep	Ram		Choice	Good		Utility	Cull	
	Ewe		Choice	Good		Utility	Cull	
	Wether		Choice	Good		Utility	Cull	
Feeder lambs 2/	Ewe	Fancy	Choice	Good	Medium	Common	Inferior	
	Wether	Fancy	Choice	Good	Medium	Common	Inferior	
Feeder yearlings 2/	Ewe	Fancy	Choice	Good	Medium	Common	Inferior	
	Wether	Fancy	Choice	Good	Medium	Common	Inferior	
Feeder sheep 2/	Ewe		Choice	Good	Medium	Common	Inferior	
Lamb and mutton								
Lamb carcasses	All classes 3/	Prime	Choice	Good	Utility	Cull		
Yearling mutton carcasses	All classes 3/	Prime	Choice	Good	Utility	Cull		
Mutton carcasses	All classes 3/		Choice	Good	Utility	Cull		
Hogs								
Slaughter hogs	Barrow and gilt	US No.1	US No.2	US No.3	Medium	Cull		
	Sow 2/		Choice	Good	Medium	Cull		
	Boar	Ungraded						
	Stag	Ungraded						
Slaughter pigs	All classes 2/		Choice	Good	Medium	Cull		
Feeder and stocker hogs	Barrow and gilt 2/		Choice	Good	Medium	Common		
	Sow, boar and stag 2/	Ungraded						
Feeder and stocker pigs	All classes 2/		Choice	Good	Medium	Common		
Pork								
Pork carcasses	Barrow and gilt	US No.1	US No.2	US No.3	Medium	Cull		
	Sow	No official grade; tentative grades not in general use.						
	Boar	Ungraded						
	Stag	No official grade; tentative grades not in general use.						

1/ Specifications are not necessarily different for each class listed. 2/ Tentative standard proposed by USDA. Not official, but widely used for many years. 3/ Grade designations apply without regard to sex condition at time of slaughter. However, carcasses with less desirable secondary sex characteristics may be discounted in grade.

Grades

Federal grades afford a common market terminology for transactions in cattle, calves, sheep, and lambs. They are being used more for hogs also, as the flaws in selling hogs by weight alone are becoming recognized. Much beef and some veal and lamb are sold by Federal grades. Federal grade names for various classes of meat animals and the several meats are listed in the table on page 4.

Uniform names and specifications for livestock grades, universally known, understood, and accepted, are valuable aids to efficient marketing.

Merchandising

Methods of merchandising meat have undergone many changes. A decade or so ago, retailing was shifted from the specialized meat market to the chain store. More recently, pre-packaging and self-service have been widely adopted. Small quantities of meat are now retailed in frozen form. New merchandising methods are constantly under experiment. Examples are research in packing house fabrication of fresh cuts, and in irradiation to preserve meat without refrigeration. New methods, if successful and adopted, would affect pricing practices. Pre-fabrication would facilitate more sale by brand names, while distribution frozen or irradiated, with greatly reduced perishability, would cause a considerable transformation in pricing. Present pricing and retailing methods are greatly influenced by the necessity to move all meat within a short time.

Changes in merchandising methods could have other consequences, such as in their effects on competition between various kinds and cuts of meat.

Farm Program Information

Another form of economic education that can never be completely separated from outlook is education on farm programs. Except for incentive guarantees on wool, there are no price supports on meat animals. Indirectly, however, livestock production is affected by programs for feed grains. On this subject, too, there is more unsupported opinion than objective evidence. 1/ Yet it is possible to discuss farm policy questions soberly and informatively. An example of the connection between policy and outlook is seen in the current trends in hog production. For several years, all producers of corn were eligible for price support on their corn at 90 percent of parity. Whenever the corn crop was above average, most of the excess went into loan and did not spur the production of hogs. During the last 2 years it was necessary for a corn producer to comply with allotments to be eligible for support. Whenever allotments are in force and most farmers comply with them, the volume of hog production is little affected by the size of each year's corn crop, just as it is with unrestricted price support. But when many choose not to comply, the size of the corn crop becomes a controlling influence on hog production.

1/ One attempt at a professional analysis is: Breimyer, Harold F. Effect of Feed Price Stabilization Programs on Livestock. Journal of Farm Economics, November 1954, p. 680.

Outlook Information

This brings us to outlook information itself. Never before has interest in the outlook been so keen, or so much information been available. The United States Department of Agriculture remains a central source. Its releases include general reviews such as the Demand and Price Situation and Farm Cost Situation, and commodity releases such as the Livestock and Meat Situation and Dairy Situation. State Experiment Stations and Extension Services blanket their States with current outlook reports, some weekly and others monthly. Private reporting and management services offer detailed current outlook appraisals. Farm organizations often do likewise, while many farm journals now carry an outlook article frequently and an outlook page regularly.

Long Run

First outlook need is for guidance in investment. No decision is more fundamental than a decision to invest in a farm or ranch, or in a livestock herd, or in substantial farm additions or improvements. Yet it is here that reliable assistance is most lacking. The few scattered attempts at long-run projection of economic growth and of demand for food can be helpful. Most of them show how the nation's productive capacity and the demand for food have expanded in the past, and they project what a continued growth would mean 10 or 20 years hence. 2/

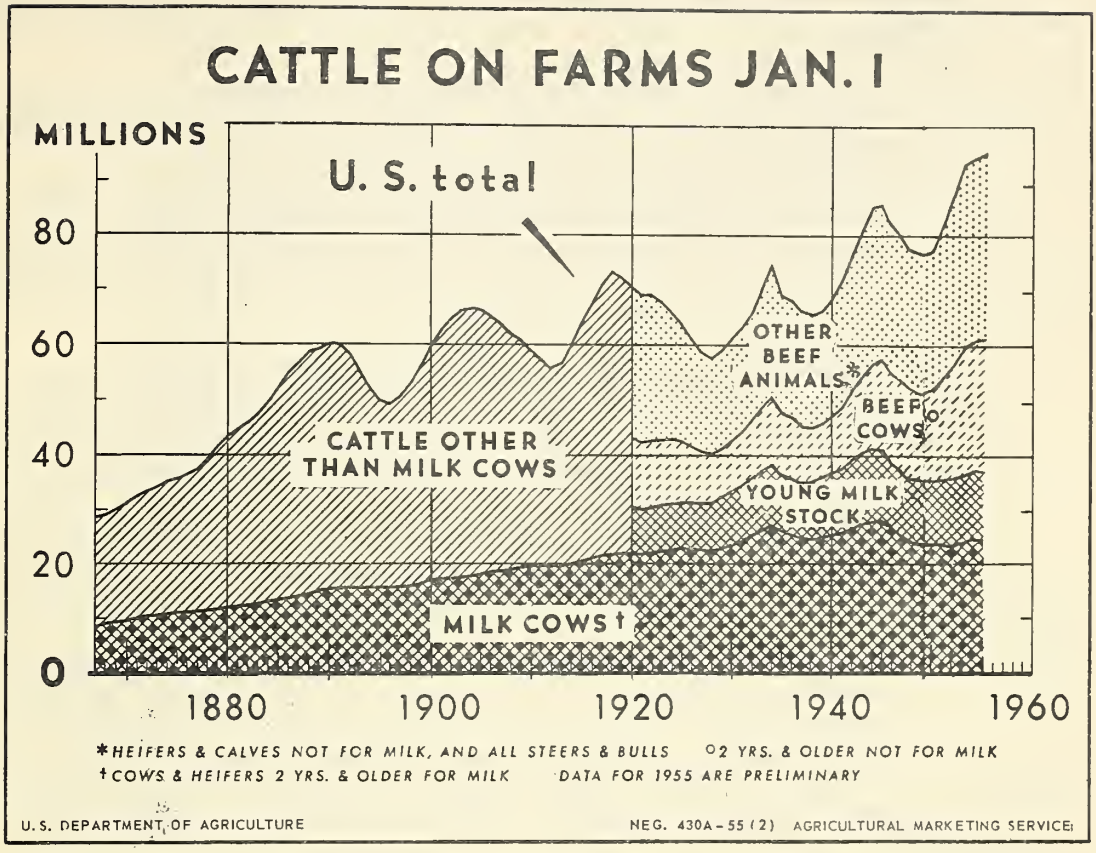
Shorter Run

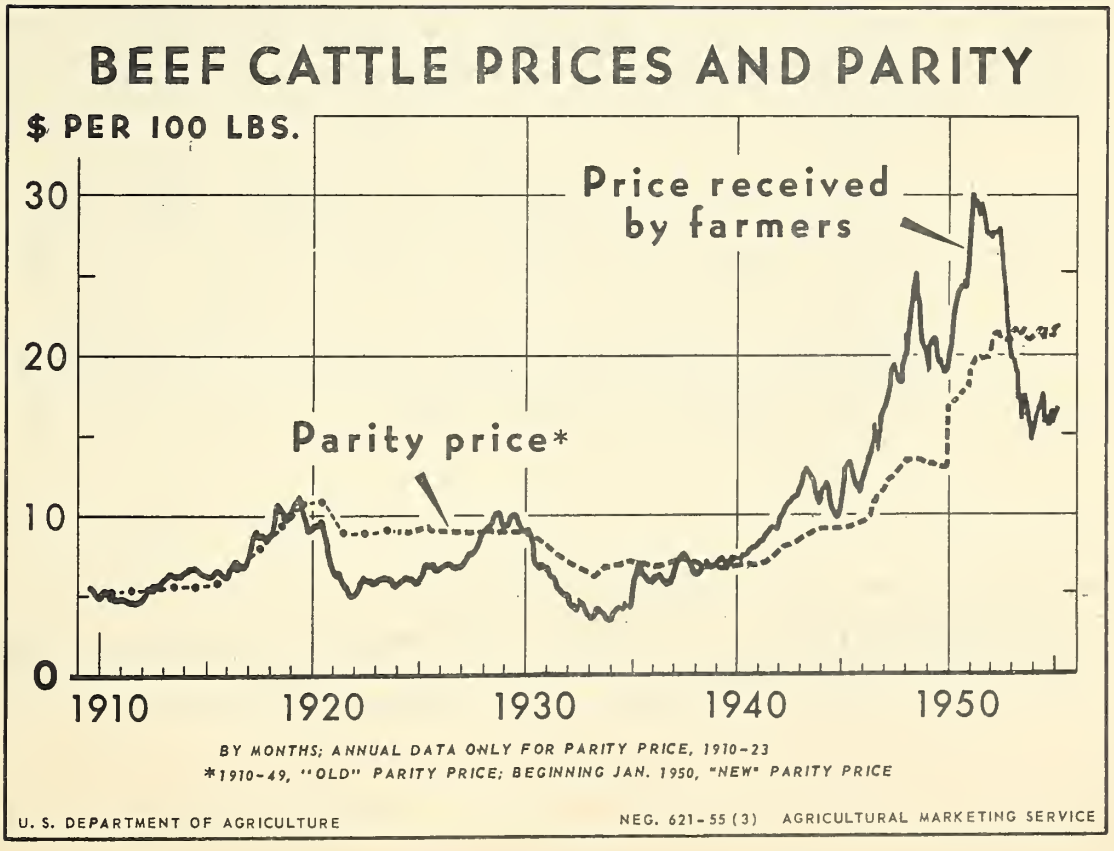
For the shorter outlook we have more weapons. The production cycle for each species of meat animals is long enough to allow short run trends to be traced fairly easily. Most familiar is the cattle cycle. The inventory of cattle and calves on farms has moved up and down through five cycles since 1880, and is midway through a sixth (upper chart, page 7). Accompanying cycles in inventories have been cycles in number slaughtered and in prices. In the present cycle, cattle and calf slaughter has risen 50 percent, from 26 million head killed in 1951 to 39 million in 1954. Prices of cattle averaged 45 percent lower in May 1955 than in May 1951 (lower chart, page 7). Cycles of such scope, binding all producers in their grip, can be ignored by no cattleman.

2/ See Potential Economic Growth of the United States during the Next Decade, Joint Committee Print, Joint Committee on the Economic Report, 83rd Congress, 2nd Session.

Long Range Prospects for Agriculture. Summary and report presented before the National Agricultural Credit Commission, Chicago, Illinois, June 6, 1955. U.S.D.A. (mimeo.).

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CATTLE ON FARMS JAN. 1
MILLIONS
U. S. total
80
60
40
20
0
OTHER BEEF ANIMALS*
BEEF COWS°
CATTLE OTHER THAN MILK COWS
YOUNG MILK STOCK*
MILK COWS†
1880
1900
1920
1940
1960
*HEIFERS & CALVES NOT FOR MILK, AND ALL STEERS & BULLS °2 YRS. & OLDER NOT FOR MILK
†COWS & HEIFERS 2 YRS. & OLDER FOR MILK DATA FOR 1955 ARE PRELIMINARY
U.S. DEPARTMENT OF AGRICULTURE
NEG. 430A-55 (2) AGRICULTURAL MARKETING SERVICE


BEEF CATTLE PRICES AND PARITY
$ PER 100 LBS.
30
20
10
0
Price received by farmers
Parity price*
1910
1920
1930
1940
1950
BY MONTHS; ANNUAL DATA ONLY FOR PARITY PRICE, 1910-23
*1910-49, "OLD" PARITY PRICE; BEGINNING JAN. 1950, "NEW" PARITY PRICE
U. S. DEPARTMENT OF AGRICULTURE
NEG. 621-55 (3) AGRICULTURAL MARKETING SERVICE

Within the broad outlines of each cattle cycle are many changed relationships:

(1) When cattle numbers start upward and prices are rising, breeding stock are in demand and their prices outrun the general advance. Later, when cattle prices are on a decline, reductions are greatest for the same classes. By May 1955 prices of Commercial slaughter cows at Chicago had decreased 52 percent, in contrast with the all-cattle reduction of 45 percent and the 37 percent decline for Choice steers at Chicago.

(2) Prices of lower-grade cattle generally experience the widest price swing (in percent). Even inferior animals command high prices in a cattle boom, but they are sharply discriminated against when cattle are plentiful and prices lower. It is hard for an extension animal husbandryman to convince producers of the need for good breeding when all prices are high; his task becomes simpler when the discounts for poor breeding become apparent on a declining market.

(3) When cattle prices are on an increase, prices of feeder cattle are bid up close to those of fed cattle. Feeders nevertheless usually make money, because of the generally rising market. When prices are lower, feeders insist on buying on a wider price margin. Prices of feeder cattle are thereby reduced farther below those of fed cattle.

(4) During the high price phase of the cattle cycle, interest is great in cow-and-calf producing programs. Impetus comes from the strong demand and high price for calves, which in turn is due to the profits to be made in grazing and feeding them. Demand often is strongest for the younger and thinner calves. It seems as though all that is desired is a skeleton with four stomachs, a hide and a mouth, and the larger the stomachs and mouth, the better. After rising sharply during the general advance, prices of beef calves in 1951 were quoted as high as $45.00 per 100 pounds, or higher. When cattle prices decline, reductions in calf prices are severe. Many producers then try to protect their incomes by putting more weight gain on young stock before sale. 3/ Interest in cow-and-calf operations recedes except in specially adapted regions.

3/ Shortage of feed or the need for current income may prevent these plans from being carried out.

(5) The marketing job is easy during the numbers-expansion part of the cattle cycle. Clamor of buyers puts few obstacles in the way of obtaining a maximum price for the seller. The many-cattle, low-price stage presents an opposite picture. Effective marketing becomes more difficult. The market is then a buyers' instead of a sellers' market. The extension marketing specialist, like the animal husbandryman, finds his services more appreciated at this stage than at the high-price period.

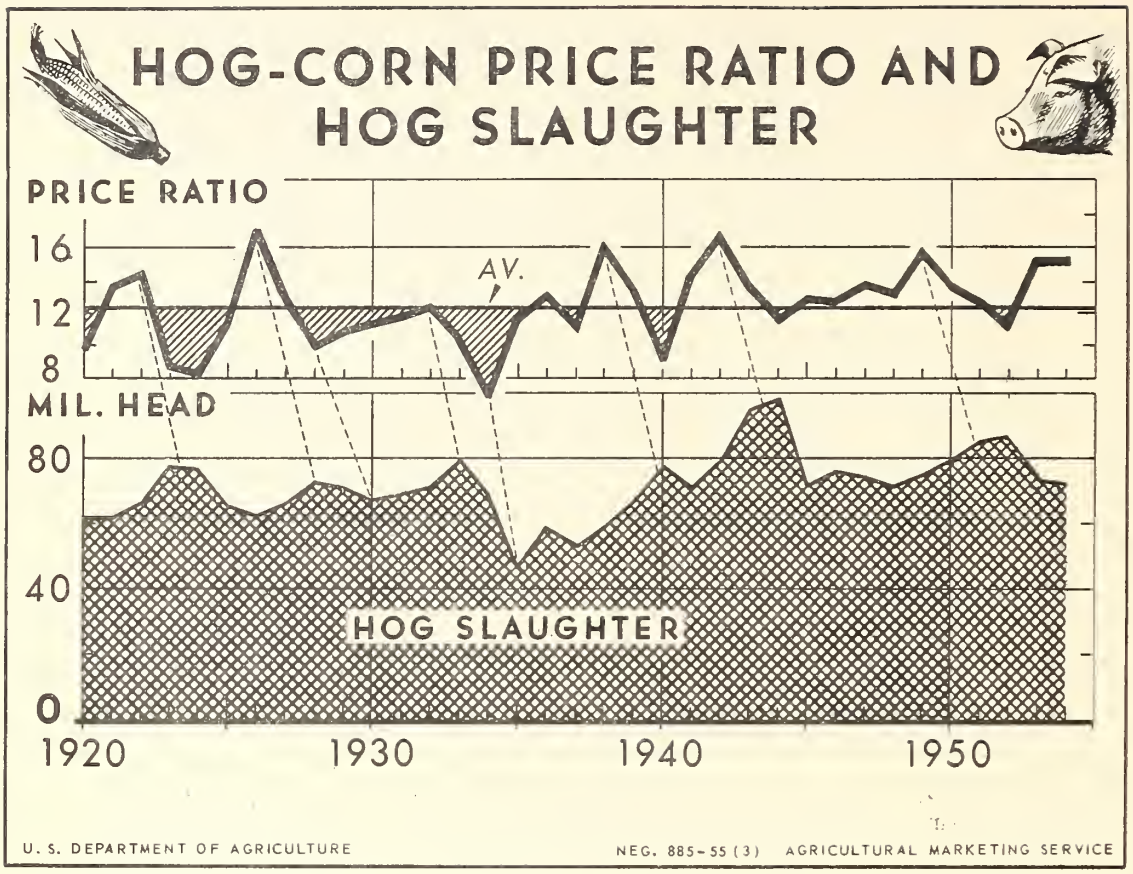
(6) As cattle producers and associated industries have become aware of the vital role of consumer demand they have turned to promotional efforts to encourage beef consumption when the supply is cyclically large. Programs by industry, with Government cooperation, to encourage demand for beef the last two years have definitely been helpful. Promotional activity is needed less at the point in the cycle when supply is small.

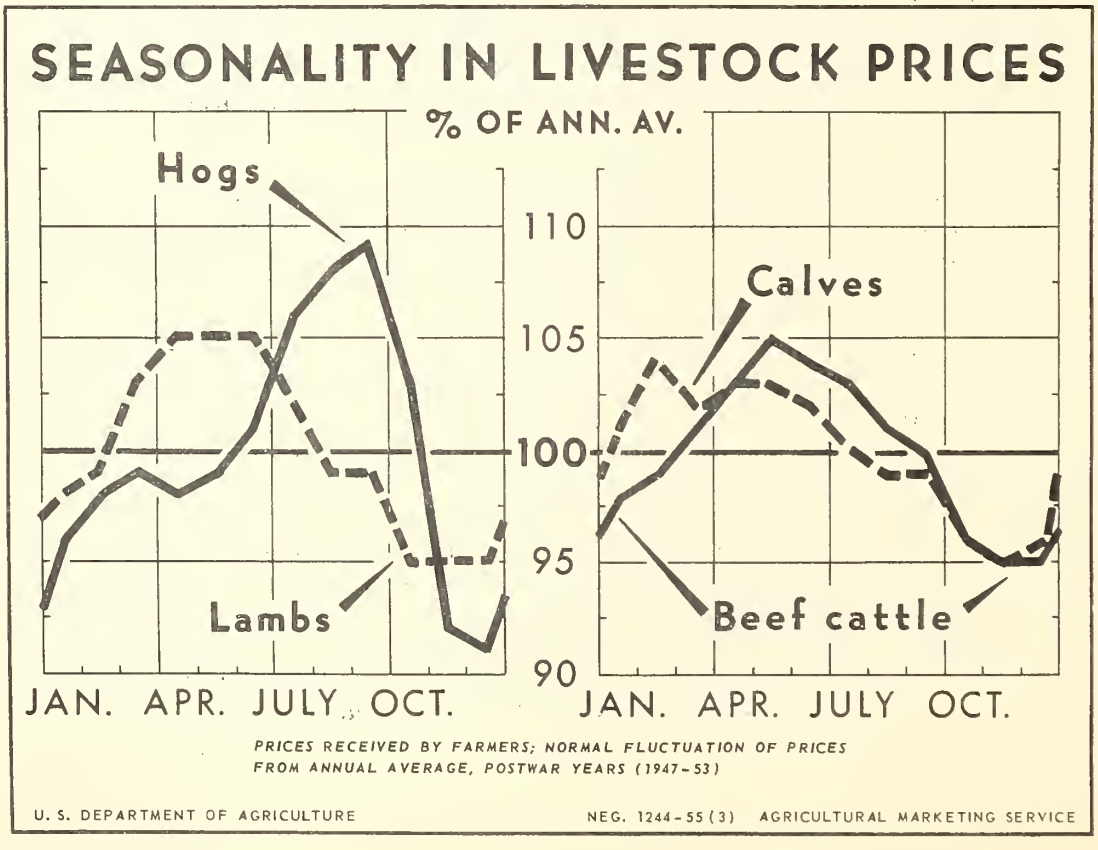
Regular cycles are less evident in sheep and hogs than in cattle. Some of the characteristics of the cattle cycle are nevertheless reproduced in the sheep and hog enterprises at times of high and low prices for those species.

The sheep industry has found the going difficult. Numbers of sheep and lambs in 1955 are only a little more than half (55 percent) their 1942 high. Competition with cattle for pasture and range and the relatively higher labor cost in sheep than in cattle production are principal factors in the decrease. The opportunities for profits from sheep need exploration in both the East and the West. Better control of parasites is helping to establish sheep in the South. Without doubt, though, opportunities for expanding United States sheep production are somewhat limited, and sheep numbers will not return to highest former levels.

Producers should watch results of organized effort to encourage consumption of lamb, which has been confined to rather narrow groups of consumers in a few areas of the nation. Wool at present is under support.

Production of hogs has traditionally been geared to quantity of corn produced. With the advent of price support and storage programs for corn, the direct connection between corn harvests and hog numbers has been weakened if not severed. But the hog-corn price ratio, which has long been a measure of corn and hog relationships, remains a controlling influence. A ratio above average is usually followed by increases first in pigs raised and then in the number of hogs slaughtered (see upper chart, page 10). Prices decline as slaughter increases. On the average, about 12 months elapse between the time sows or gilts are bred and their progeny are ready for market. As prices of hogs can change a great deal during that time, producers do well to base their plans for production not on prices at the time of breeding, but on the best available outlook estimate of price trends in the year ahead.


HOG-CORN PRICE RATIO AND HOG SLAUGHTER
PRICE RATIO
16
12
8
AV.
MIL. HEAD
80
40
0
HOG SLAUGHTER
1920
1930
1940
1950
U. S. DEPARTMENT OF AGRICULTURE
NEG. 885-55 (3) AGRICULTURAL MARKETING SERVICE


SEASONALITY IN LIVESTOCK PRICES
% OF ANN. AV.
Hogs
Lambs
Calves
Beef cattle
110
105
100
95
90
JAN. APR. JULY OCT.
JAN. APR. JULY OCT.
PRICES RECEIVED BY FARMERS; NORMAL FLUCTUATION OF PRICES FROM ANNUAL AVERAGE, POSTWAR YEARS (1947-53)
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1244-55 (3) AGRICULTURAL MARKETING SERVICE

Seasonal Trends

Another of the trends to be followed in outlook work is the seasonal trend. Livestock production and marketing are strongly linked in nature to the seasons. Producers have managed to free themselves from that linkage to some degree but not totally. More pigs are born in March and April than in any other months. August and September are a second period of many farrowings. Dairy calves are born in all months, but beef calves arrive predominantly in the spring. Lambs also are born in late winter and spring. Marketings of hogs are bunched in November to January, with a secondary peak in early spring. Marketings of cattle and lambs off grass are greatest about October. Feeding of cattle and lambs distributes the supply for slaughter more evenly throughout the year.

Prices of meat animals trace fairly regular seasonal patterns (see lower chart, page 10).

Producers can often apply knowledge of seasonal trends to their advantage. They can frequently avoid selling their animals at a time of lowest prices, aiming instead for a period when prices are usually highest. Not only does it profit a grower to know the most usual seasonal trends; by following the outlook, he can recognize and adjust to special trends in a given year.

Seasonality in meat animals is reviewed in many publications of State Colleges and Experiment Stations, and in a bulletin of the Agricultural Marketing Service, "Charting the Seasonal Market for Meat Animals." 4/

As the bulletin is readily available, seasonal trends as an element in the outlook will not be elaborated. 5/

Feeding Programs

A special application of short-run outlook deserves mention. Feeding of cattle and lambs is a short-run activity the financial success of which depends on two factors: seasonal price trends, and price relations between feeder stock, feed, and fed stock. Most feeder cattle and lambs are bought for feeding at the end of the grazing season. As this is the season of lowest prices for these classes, a price rise normally accompanies the feeding interval. In addition, a higher price is usually realized after feeding because the grade has been increased.

4/ By Harold F. Breimyer and Charlotte A. Kause, U. S. Dept. Agr., Agr. Handbook No. 83.

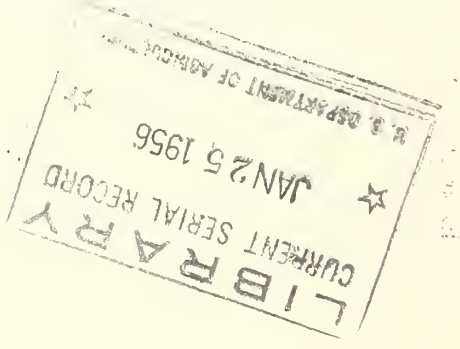
5/ The bulletin was in print at the time of this writing, and should be available about July 1. It will be sent routinely to all who regularly receive the Livestock and Meat Situation.

Relationships between prices of feeders, feed, and fed animals are best observed by use of standard feeding programs. The feed and other requirements for putting on a specified weight gain can be set forth rather accurately. Extension specialists in most feeding States have worked up the necessary data. Comparisons for 6 selected general Corn Belt programs have been developed by the Agricultural Marketing Service. 6/

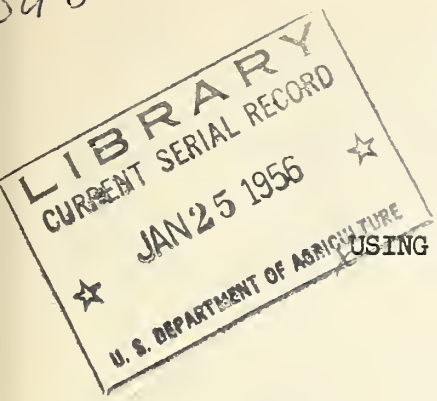
Feeding program data do not themselves present the outlook. They are only a device for making reliable comparisons. The key forecast needed for them is the selling price for fed cattle or lambs at the end of the feeding period. Usually the cost of feed can be foreseen without great error. From estimated prices of fed stock and of feed, it can be shown whether current prices of feeders do or do not give bright promise of profit. Moreover, data can be inserted for various programs to suggest which program is the most promising. Sometimes, in cattle feeding, prospects for profit will be found in less common programs such as feeding heifers or lower grade steers. Other times, high grade steers seem the best choice.

Described here are the aspects of the livestock outlook that are most universally used. Scarcely mentioned are others of more limited application, or those for which present knowledge is inadequate. The marketing outlook for the very short run, for instance, is reported by only a few States. Where available it has proved effective and beneficial. It is one of several areas of the livestock outlook that needs to be developed further. And all livestock outlook work needs constant scrutiny, research, and improvement, both in content and in methods of dissemination and application, that it may be an increasingly valuable service to producers, marketers, and consumers of livestock and their products.

6/ Miller, Earl E., Returns in 6 Cattle Feeding Programs, 1953-54. The Livestock and Meat Situation, Jan. 7, 1955, p. 24.


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USING USDA STATISTICAL REPORTS TO ANTICIPATE EGG SUPPLIES AND PRICES*

by Edward Karpoff

Reduced to practical terms, "How to use Crop Reports and other statistical data bearing upon egg supplies and prices" means: "How to predict forthcoming reports from a study of current and past reports."

At the outset I will say that I know of no completely satisfactory means of doing this. As a matter of fact, we cannot perfectly foretell the future. By devices that are described below, however, the careful analyst can do much better than mere chance would dictate in anticipating egg supplies and prices.

Statistically speaking, egg production on farms is the result of multiplying numbers of layers by rate of lay per layer. Recent United States Department of Agriculture estimates of these data, taken from the monthly Crop Production--"Crop Report," as it is commonly called--are shown in table 1. Entries at the top of the table are averages for the respective months; in the lower section are entries for the first of the month.

The Crop Report carries the figures on both bases, except that for the first of each month when the analyst must perform his own multiplication of numbers of layers times rate of lay. Since the figures for each month are the result of averaging data for the first of that month and the first of the month following, first-of-month figures are always 2 weeks more nearly up-to-date than monthly figures. First-of-month figures are also "sharper" than the averages based on them. For these reasons, I prefer to use the first-of-month figures as the bases for my projections, rather than monthly average figures.

There is another reason for preferring first-of-month data to monthly data. When we use monthly data, invariably we wind up discovering that, in every fourth February, egg production exceeds trend expectations by 3 or 4 percent. And then we are puzzled because February prices don't necessarily have a fillip that gives a mirror-image of the trough that egg production of the month makes between January and March. Of course, these paradoxes wash away when we divide through by February's 28 days instead of by the 30 or 31 of other months.

* Prepared for the 33rd Annual Agricultural Outlook Conference, November 28-December 1, 1955, Washington, D. C.

Agriculture-Washington

Table 1.- Number of layers on farms, rate of egg production, and total egg output on farms, monthly data, August 1951 to date

Item, year	Unit	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
						(a) Monthly average data							
Average number of layers on hand	Mil.												
1951-1952		291	316	351	374	385	384	375	360	342	324	306	292
1952-1953		294	321	352	371	379	374	363	351	336	321	306	297
1953-1954		299	324	356	378	387	383	372	360	345	330	317	309
1954-1955		319	350	380	394	398	390	379	367	353	338	326	319
1955-1956		323	347	374									
Eggs laid per 100 layers	Eggs												
1951-1952		1,413	1,246	1,202	1,153	1,235	1,395	1,510	1,773	1,799	1,833	1,630	1,516
1952-1953		1,401	1,273	1,243	1,205	1,324	1,452	1,467	1,797	1,813	1,836	1,662	1,584
1953-1954		1,476	1,317	1,311	1,281	1,363	1,432	1,477	1,839	1,826	1,854	1,677	1,569
1954-1955		1,458	1,341	1,338	1,311	1,406	1,479	1,455	1,792	1,851	1,903	1,748	1,658
1955-1956		1,516	1,382	1,387									
Total monthly egg production	Mil. cs.												
1951-1952		11.4	10.9	11.7	12.0	13.2	14.9	15.7	17.7	17.1	16.5	13.9	12.3
1952-1953		11.5	11.3	12.1	12.4	13.9	15.1	14.8	17.5	16.9	16.4	14.1	13.1
1953-1954		12.3	11.9	13.0	13.4	14.6	15.2	15.3	18.4	17.5	17.0	14.8	13.5
1954-1955		12.9	13.0	14.1	14.4	15.5	16.0	15.3	18.3	18.1	17.9	15.8	14.7
1955-1956		13.6	13.3	14.4									
						(b) First-of-month data							
Number of layers on hand	Mil.												
1951-1952		285	297	335	367	382	388	381	370	351	333	315	297
1952-1953		288	301	340	364	378	380	369	357	344	329	313	300
1953-1954		294	305	343	370	386	387	378	367	353	337	324	310
1954-1955		308	330	370	390	398	397	383	375	360	346	331	321
1955-1956		316	329	365	382								
Eggs laid per 100 layers	Eggs												
1951-1952		47.7	43.5	39.5	38.1	38.7	40.9	49.1	55.1	59.3	60.6	57.6	51.0
1952-1953		46.7	43.7	41.2	39.1	41.3	44.2	49.6	55.3	60.6	60.2	58.2	52.5
1953-1954		49.7	45.6	42.3	42.4	43.1	44.9	47.5	58.0	60.6	61.1	58.6	53.3
1954-1955		48.0	46.0	43.4	42.9	44.6	46.2	49.2	54.7	60.8	62.5	60.2	56.3
1955-1956		50.6	47.3	44.9	44.6								
Daily rate of egg production	Mil. eggs												
1951-1952		136	129	132	140	148	159	187	204	208	202	182	152
1952-1953		134	132	140	142	156	168	183	198	208	198	182	158
1953-1954		146	139	145	157	166	174	180	213	214	206	190	165
1954-1955		148	152	161	167	178	183	189	205	219	216	199	181
1955-1956		160	156	164	171								

RATE OF LAY

It seems easier to predict rate of lay than numbers of layers. Analysts with husbandry experience know that flock performance varies with temperature changes, age and condition of the birds, and a host of other things. But on a U. S. average basis, the effects of events such as weather are unpredictable; the effects of flock health seem to wash out; and others, such as average age of the flock, just don't seem to matter at all. So rate of lay becomes a relatively simple factor to predict.

One way to do it is to lay a ruler over the entries that are shown for each individual month in the appended 12-section chart on monthly rate of lay, and extend the trend line as the first approximation.

If you wish to proceed to a finer point, you may consider where the latest-reported rate of lay stands relative to trend or to last year, and you may wish to impute a similar deviation to the prospective rate of lay for the first of the next month. Or you may wish to impute an effect to changed economic circumstances, or to whatever you think is relevant in affecting rate of lay. The advantage of making your imputations while the historical data are before you is that then you can see how steady the previous trends in rate of lay have been, and realize how startling a shock it requires to induce a great deviation from that trend.

At this point it is worth while to introduce an aside to indicate how consideration of only one factor, rate of lay, can lead to a significant inference about prospective egg supplies and prices. In mid-February 1955 egg prices were at a peak, well above the preceding fall, and many people were wondering whether this wasn't at last "the egg price level that should have prevailed all along."

On March 10, when egg prices were still near the level of a month earlier, the Crop Report reported a March 1 rate of lay 6 percent lower than that of the previous March 1. Mid-February prices were thus shown to be the result of a tight supply which reflected the suddenly depressed rate of lay. Therefore, a more-than-seasonal change in supply, and hence in price, should have been expected when the rate of lay was restored to normal.

Subsequent events were actually on that order: The U. S. average farm price of eggs, which had been 39.5 cents per dozen in mid-February, was 35.9 cents in mid-April. On the other hand, if the March 1 rate of lay had been at trend, it would have suggested that some other basis prompted the high February-March price, a basis perhaps less temporary than a depressed rate of lay.

NUMBER OF LAYERS

The size of the laying flock varies from year to year with the number of hens carried over from their pullet year and with the number of replacement pullets added to flocks. In addition, there is some variation in culling rates within the year. Variation within the laying year in culling rates, however, is very small in relation to changes in the level of flock replacement.

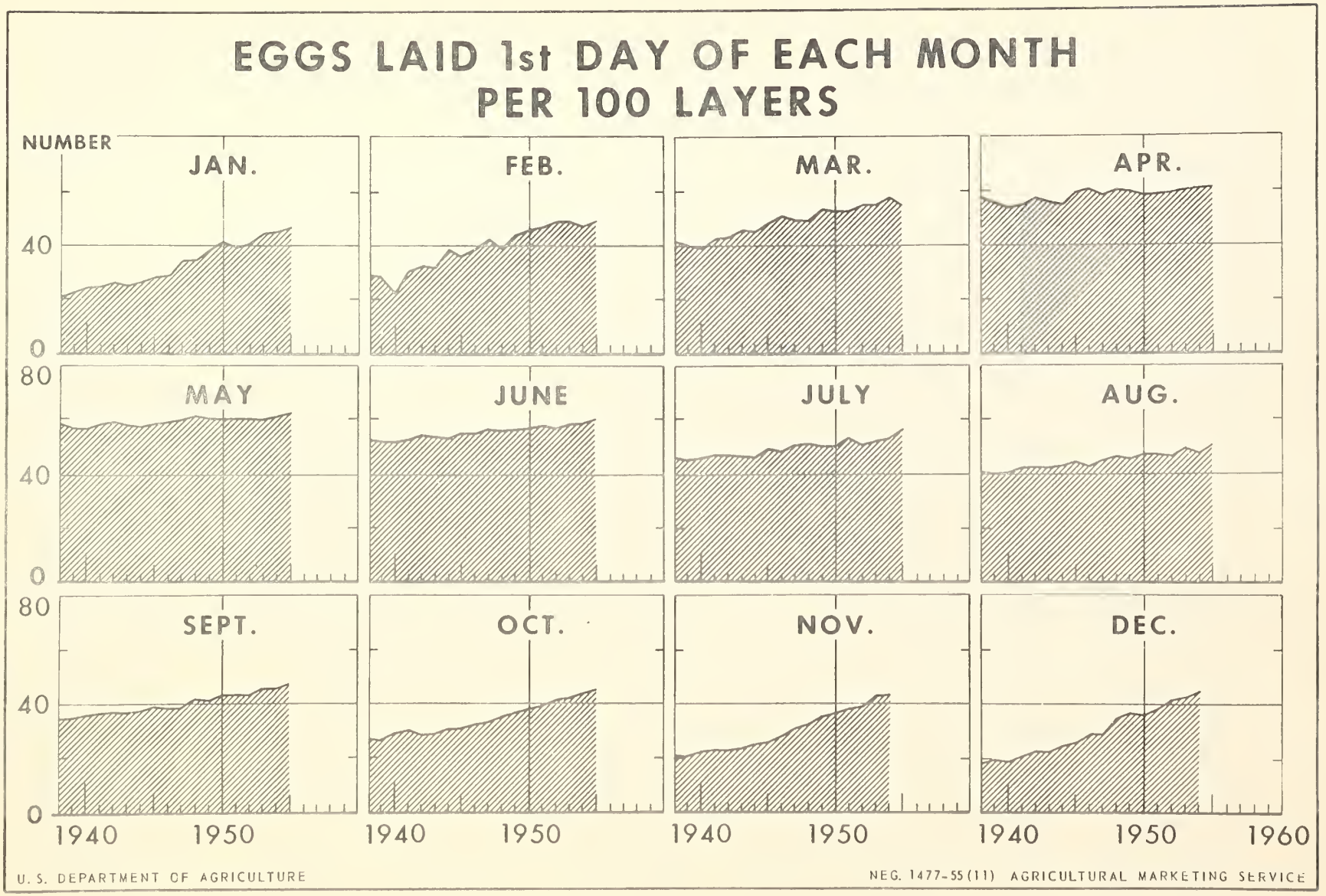

EGGS LAID 1st DAY OF EACH MONTH
PER 100 LAYERS
NUMBER
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.
0
40
80
1940
1950
1960
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1477-55(11) AGRICULTURAL MARKETING SERVICE

Table 2.- Annual and first-of-month rates of lay, United States, 1925 to date

Year	Annual rates per layer		Rate per 100 layers, first-of-month											
	Per hen and pullet on farms Jan. 1	Per layer on hand during the year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1925	90	112	10.2	16.8	35.5	52.8	54.3	48.2	41.1	36.7	31.7	24.9	13.8	10.8
1926	95	118	14.8	20.2	37.9	51.5	56.1	50.4	42.8	38.3	33.4	25.2	15.1	10.7
1927	93	117	14.1	20.0	38.6	54.8	55.3	49.6	41.4	36.2	30.5	22.5	15.2	11.8
1928	91	119	13.3	21.2	33.7	52.4	53.8	49.5	41.8	36.1	31.9	25.0	16.4	12.2
1929	94	119	16.9	21.2	32.5	55.2	56.3	50.6	43.2	38.8	32.9	25.1	15.7	11.7
1930	93	121	14.7	19.2	42.0	53.8	55.0	49.0	42.3	35.7	31.1	24.2	15.4	13.5
1931	96	127	16.2	25.2	41.1	52.8	56.5	50.9	42.9	38.1	34.4	25.6	18.1	15.3
1932	94	121	18.2	25.8	39.3	50.7	55.7	49.5	42.6	36.9	33.2	24.8	16.2	12.0
1933	91	118	14.2	28.3	34.3	52.1	54.9	46.4	39.6	36.1	30.6	22.9	15.2	12.5
1934	89	118	17.1	24.6	34.7	51.0	55.0	48.1	40.8	33.8	30.0	23.9	16.6	14.4
1935	96	122	15.8	20.7	36.1	53.9	55.4	50.4	43.8	36.5	32.5	25.2	18.1	15.2
1936	95	121	17.8	22.4	32.0	54.5	56.6	51.2	44.0	36.2	31.3	24.5	17.2	15.0
1937	99	130	20.6	24.7	38.3	52.7	57.8	52.4	44.3	40.2	35.5	28.0	19.8	17.5
1938	106	135	21.1	29.6	41.0	57.6	58.1	52.8	46.0	40.8	34.7	27.4	20.9	18.3
1939	103	134	22.6	29.4	40.1	55.9	57.5	52.3	45.2	40.1	35.1	27.0	20.7	19.8
1940	101	134	24.2	22.8	39.4	53.3	57.0	52.9	45.7	40.6	36.0	29.1	22.3	19.0
1941	110	139	24.8	31.6	42.3	54.3	58.6	53.4	47.1	42.0	37.0	30.2	22.8	20.7
1942	114	142	26.6	32.8	42.9	57.2	59.4	54.4	47.3	42.2	37.5	29.4	22.8	22.6
1943	112	142	25.5	32.6	45.9	55.9	58.0	54.0	46.4	42.1	36.9	29.6	23.0	22.2
1944	112	148	26.5	38.4	45.7	55.2	57.4	53.8	46.3	42.8	37.4	31.4	25.3	24.6
1945	119	152	28.5	36.7	48.1	59.5	58.5	55.2	49.5	44.6	39.3	31.7	25.9	26.1
1946	118	156	29.4	38.6	50.3	60.0	59.5	55.2	48.3	42.5	38.4	32.6	28.1	29.3
1947	128	160	35.1	42.1	49.4	58.1	59.9	56.8	50.8	45.2	38.4	33.6	31.3	29.3
1948	131	166	35.4	39.5	49.2	59.9	60.9	56.7	51.5	46.9	41.9	35.9	32.5	34.3
1949	141	170	38.9	43.9	53.3	59.6	60.1	56.8	51.0	45.8	41.8	36.9	35.3	37.1
1950	139	172	41.4	46.0	52.8	58.2	60.0	57.2	51.2	47.4	43.0	38.0	36.9	36.3
1951	144	175	39.8	47.1	53.2	58.7	60.6	58.0	53.1	47.7	43.5	39.5	38.1	38.7
1952	145	178	40.9	49.1	55.1	59.3	60.6	57.6	51.0	46.7	43.7	41.2	39.1	41.3
1953	154	183	44.1	49.3	55.1	60.5	60.2	58.2	52.4	49.5	45.3	42.0	42.1	42.9
1954	158	184	44.8	47.5	58.0	60.6	61.2	58.5	53.1	47.8	45.7	43.1	42.6	44.3
1955	1/160		46.2	49.2	54.7	60.8	62.5	60.2	56.3	50.6	47.3	44.9	44.6	

1/ Unofficial estimate.

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Data on laying flock numbers are published in the monthly reports of Crop Production. The numbers of layers on farms are published both as an average for the month and as of the first of the month. In addition, during the spring there are first-of-month numbers for young chickens on farms, and later in the year numbers on pullets not yet of laying age are published. Twice a year, as of October 1 and January 1, a further breakdown is available, showing numbers of hens and of pullets making up the laying flock. For October 1, this is published in Crop Production; for January 1 it must be deduced from Crop Production taken in conjunction with the report of Livestock and Poultry on Farms January 1.

Table 3 indicates some fairly consistent ratios between (1) statistical series which are evident fairly early in the season, such as chickens raised, and (2) the components of the October 1 and January 1 breakdowns of the poultry flock. Extending such ratios, and tempering the extensions by whatever might be recognized as extraordinary in the current year, one can tentatively predict the chicken population for the bench-mark dates of October 1 and January 1.

Of course, as each season progresses and newer data become available, judgments based on the new information should supersede the old judgments. It is always pleasant if the new information simply confirms the original conclusion, but in case of deviation it ordinarily is wiser to lend greater credence to the newer data. For example, my present anticipation (November 1955) of the number of potential layers to be on hand January 1, 1956, is 102 or 103 percent of the number a year earlier. This is based upon numbers of potential layers on November 1, 1955, compared to numbers a year earlier. When such new data appear, base your projections on it, don't stick stubbornly to earlier projections based on old data.

REVISE FORECASTS CONTINUALLY

This offers another opportunity to bring up a side remark. Speaking figuratively, the forecaster should be prepared to cross out his predictions whenever the bases of his forecasts cease to be valid, or are superseded by conflicting data. In effect, we should be prepared to get unmarried from our previous forecasts whenever a basis appears for making a better one. The process should be one of constant revision as new facts develop.

After the analyst has established benchmark poultry populations, he can assume corresponding percentage changes from the year before in the size of the egg laying flock for the months close to that benchmark month. For example, on the basis of present data, if we accept a 2 or 3 percent decrease from last year in the size of the January 1 flock of potential layers, I am willing to assume a similar percentage relationship to year-before numbers for several months beyond that benchmark.

Compared with changes in replacement of pullets, culling rates within each laying year are remarkably stable. Particularly in the first 5 or 6 months of the calendar year, month-to-month changes in flock numbers fall in a pattern. Table 4 shows why I am willing to carry forward, from January 1 until almost mid-year, whatever percentage change is currently indicated for numbers of potential layers.

Table 3 .- Composition of flocks, October 1 and January 1 following, 1931 to date

Year	Hens				Pullets							Pullets not yet laying, Jan. 1 following		Total of listed categories for respective dates	
	Oct. 1		Jan. 1 following		Oct. 1				Laying, Jan. 1 following		Other young chickens, Oct. 1				
	Number	As a percentage of Jan. 1 pullets	Number	As a percentage of Oct. 1 hens	Number			Total as a percentage of chickens raised	Number	As a percentage of Oct. 1 laying and not yet laying		Number	As a percentage of Oct. 1 "other young chickens"	Oct. 1	Jan. 1 following 1/
					Laying	Not yet laying	Total								
	Mil.	Pct.	Mil.	Pct.	Mil.	Mil.	Mil.	Pct.	Mil.	Pct.	Mil.	Mil.	Pct.	Mil.	Mil.
1931	195	80	156	80	84	156	240	34	185	77	122	44	36	557	385
1932	189	82	154	81	88	167	254	35	192	76	133	45	34	576	391
1933	184	78	147	80	87	167	254	34	196	77	130	42	32	568	385
1934	180	76	139	77	79	149	229	36	172	75	102	40	39	511	351
1935	171	81	136	80	88	154	242	37	186	77	104	40	38	517	362
1936	164	73	130	79	101	110	271	38	210	77	119	39	33	554	379
1937	171	69	138	81	89	159	248	41	173	70	85	42	49	504	353
1938	158	73	134	85	100	175	276	42	194	70	102	48	47	536	376
1939	167	69	139	83	101	186	287	41	202	70	111	51	46	565	392
1940	158	62	141	89	112	180	292	46	192	66	98	48	49	548	381
1941	166	69	150	90	123	205	328	44	221	67	113	57	50	607	428
1942	183	66	170	93	137	227	363	43	255	70	115	63	55	661	488
1943	228	71	174	76	124	269	393	39	282	72	151	67	44	772	523
1944	229	65	172	75	134	212	347	42	254	73	100	47	47	676	473
1945	214	71	151	71	128	243	371	42	269	73	137	53	39	722	473
1946	202	63	150	74	126	199	325	44	244	75	87	37	43	614	431
1947	198	70	140	71	131	195	326	45	243	75	86	35	41	610	418
1948	193	69	141	73	125	176	301	49	227	75	70	31	44	564	399
1949	184	71	137	74	140	185	324	46	255	79	75	32	43	583	424
1950	192	67	146	76	143	159	301	47	234	78	77	30	39	570	410
1951	186	70	144	77	149	172	321	48	244	76	76	32	42	583	420
1952	185	67	150	81	154	139	293	47	230	78	63	24	38	541	404
1953	171	68	132	77	171	145	315	52	255	81	63	26	41	550	413
1954	177	63	131	74	193	135	328	53	266	81	48	25	52	553	422
1955	193	66			171	124	295	56			42			530	

1/ For January 1, these are "potential layers"; for October 1, these differ from potential layers by the inclusion of "other young chickens."

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After July 1, however, the size of the national laying flock becomes increasingly affected by the number of replacement pullets being raised. Therefore, when we need to anticipate 3rd quarter numbers of layers, we must form judgments as to the number of chickens to be raised and whether the seasonal distribution of the hatch will be early or late. Those estimates can be combined with data such as are shown in table 2 to form a projection of October 1 numbers of layers. This projection should be expressed as a percentage of the year before. Then for the months immediately preceding October the analyst should estimate laying flock numbers at a level that will make a gradual transition from his indicated percentage changes from last year for (1) July 1 and (2) October 1.

With size of laying flock thus "established," and rate of lay likewise "established," the two can be multiplied to indicate production, the largest factor in determining total available supply.

SUPPLY REFLECTS PRODUCTION

The eggs we eat from month to month are essentially those produced, after adjustments (1) for commercial egg breaking, (2) for movements of shell eggs to and from storage, (3) for eggs used for hatching, and (4) for similar utilizations that affect distribution of shell eggs. A satisfactory method for making these adjustments, and computing the monthly per capita disappearance of shell eggs, was published in The Poultry and Egg Situation for January 1955. 1/

The chart on the following page indicates the association between per capita disappearance and the U. S. average farm price of eggs. In the chart, the per capita disappearance of eggs for the given months is compared with the mid-month farm egg price of the following month, thereby assuming a 1-month lag between production and price. This shows how supply data, which can be anticipated in accord with the above description, can be related to prices. Note that the relationship is short of perfect: measurement of the variations in demand are a necessary consideration, too, for a proper explanation of prices. In measuring changes in demand, and their effects, we are on somewhat weaker ground than when measuring supply changes. But at least one necessary part of the supply-demand structure can be constructed on the basis shown here, and we think we are beginning to make some progress toward more useful quantitative measurement on the demand side.

1/ Gerra, Martin J., "A Monthly Series of Civilian Per Capita Egg Consumption," Poultry and Egg Situation PES-175, AMS, Washington, D. C., January 1955. Pages 23-29.

Table 4.- Chickens: January-August changes in numbers of layers, 1950 to date, with comparisons

Year	Jan. 1 hens and pullets on farms	Layers on farms first of month							
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.
	a. As reported								
1950	423.8	391.6	381.8	370.5	355.2	334.4	315.1	299.5	289.2
1951	410.2	380.1	372.5	363.8	346.1	329.1	311.0	297.3	284.8
1952	419.9	388.0	380.8	369.7	350.8	332.7	315.2	297.2	287.5
1953	404.0	379.5	368.9	357.5	343.7	329.1	312.5	300.4	293.5
1954	413.6	387.3	378.0	366.8	353.3	336.9	323.9	310.2	307.9
1955	421.9	397.0	383.2	375.0	359.7	345.7	331.1	321.2	316.2
	b. As a percentage of previous year								
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
1950	106	106	105	105	106	105	104	103	105
1951	97	97	98	98	97	98	99	99	98
1952	102	102	102	102	101	101	101	100	101
1953	96	98	97	97	98	99	99	101	102
1954	102	102	102	103	103	102	104	103	105
1955	102	102	101	102	102	103	102	104	103
	c. As a percentage of January 1 hens and pullets								
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
1950	100	92	90	87	84	79	74	71	68
1951	100	93	91	89	84	80	76	72	69
1952	100	92	91	88	84	79	75	71	68
1953	100	94	91	88	85	81	77	74	73
1954	100	94	91	89	89	81	78	75	74
1955	100	94	91	89	85	82	78	76	75

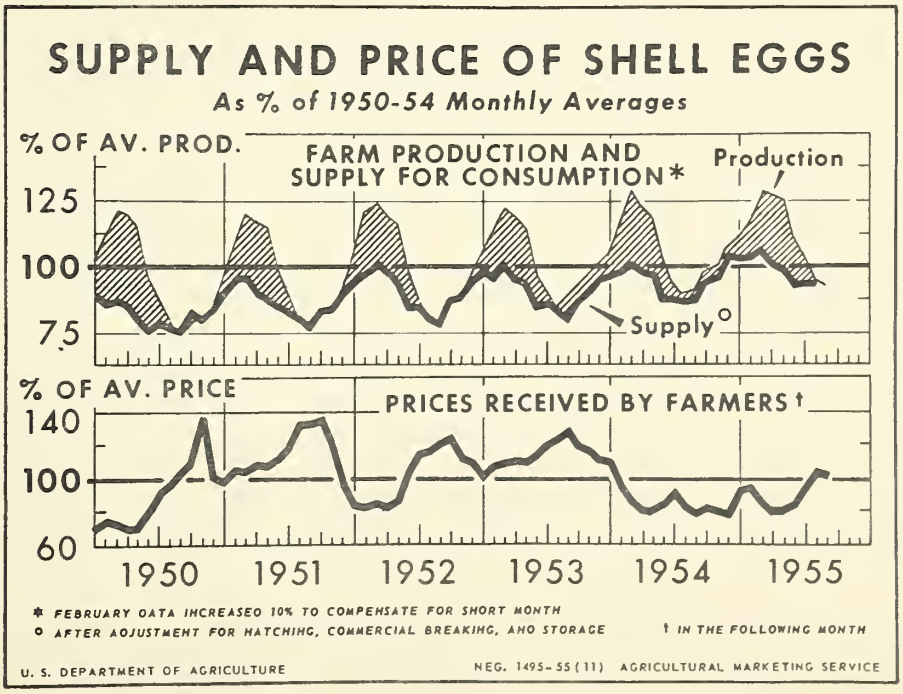


Table 5 .- Shell eggs: Farm production and effective supply, and average price received by farmers, monthly, 1950 to date

(including data for chart on page 9)

Year	Months													Total and average 3/
	Jan.	February 1/	February 2/	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.	Mil. doz.
	(a) Farm production													
1950	436.5	433.6	477.0	520.2	509.2	491.8	416.4	375.0	343.6	320.6	337.2	338.5	372.0	4,938.0
1951	422.5	431.1	474.2	513.4	503.4	490.2	421.8	378.8	342.8	328.2	351.6	359.2	395.7	4,981.8
1952	446.8	472.3	519.5	532.2	512.2	494.8	415.9	369.3	343.8	340.1	364.2	372.5	417.9	5,129.2
1953	452.8	444.0	488.4	524.9	508.3	490.9	424.3	392.0	368.3	355.9	389.5	403.4	439.1	5,237.8
1954	456.6	458.4	504.2	551.8	525.0	510.4	443.1	404.2	387.3	391.2	423.8	430.5	465.8	5,493.9
1955	480.9	459.8	505.8	548.7	544.1	536.7	475.1	440.4	407.9	399.8	431.8			
Average 1950-54	443.0	447.9	492.7	528.5	511.6	495.6	424.3	383.9	357.2	347.2	373.3	380.8	418.1	5,156.2
	(b) Eggs used for commercial breaking													
1950	35.2	58.7	64.6	93.2	90.1	100.8	74.6	46.8	26.9	17.3	7.9	4.9	2.0	563.4
1951	17.7	27.0	29.7	60.0	65.2	68.2	38.6	17.6	10.6	5.9	3.4	2.4	1.8	321.0
1952	18.2	37.5	41.2	48.8	49.6	55.4	38.1	17.1	9.4	8.6	5.4	4.7	5.1	301.6
1953	14.0	36.6	40.3	52.1	57.4	56.4	45.3	17.3	9.9	6.3	7.1	6.6	11.5	324.2
1954	23.4	37.2	40.9	72.4	66.4	56.5	44.0	19.3	9.6	7.6	8.9	6.7	11.1	366.8
1955	23.9	30.8	33.9	52.9	62.3	66.1	56.2	28.2	12.5	7.0				
Average 1950-54	21.7	39.4	43.3	65.3	65.7	67.5	48.1	23.6	13.1	9.1	6.5	5.1	6.3	375.3
	(c) Eggs used for hatching													
1950	17.1	32.1	35.3	39.9	30.1	14.7	10.8	9.1	8.8	9.0	8.5	8.2	11.5	203.0
1951	19.3	32.4	35.6	42.6	36.4	19.2	14.1	10.7	9.2	9.9	10.0	10.4	14.6	232.1
1952	22.7	34.9	38.4	39.3	29.2	15.7	11.4	9.3	9.5	10.3	10.5	11.3	14.9	222.5
1953	20.2	32.9	36.2	37.9	30.4	18.0	12.8	10.8	10.3	11.6	12.8	13.8	16.6	231.4
1954	22.5	36.4	40.0	39.4	28.4	16.7	14.3	11.8	11.5	10.2	10.2	10.3	13.1	228.4
1955	19.0	29.7	32.7	34.5	27.7	18.4	15.8	12.7	11.5	12.7				
Average 1950-54	20.4	33.7	37.1	39.8	30.0	16.9	12.7	10.3	9.9	10.2	10.4	10.8	14.1	223.5
	(d) Changes in storage stocks of shell eggs 4/													
1950	8.1	10.6	11.7	16.8	25.5	38.0	7.6	-15.1	-17.8	-30.3	-31.7	-13.2	- .8	- 1.2
1951	1.2	2.5	2.8	4.5	19.9	33.3	10.3	- 4.7	-19.6	-19.7	-12.9	- 8.9	- 2.7	3.5
1952	2.9	21.1	23.2	19.6	17.6	30.0	5.2	-18.9	-16.8	-13.8	-21.3	-18.2	- 7.2	2.3
1953	- 1.0	3.8	4.2	3.8	13.2	18.4	2.5	- 9.4	-11.2	-10.0	- 6.2	- 4.5	--1.4	- 1.6
1954	- .5	1.8	2.0	9.3	8.6	18.6	8.7	- 6.1	-12.1	- 5.9	- 5.9	- 9.3	- 4.0	3.4
1955	1.3	1.0	1.1	6.3	21.1	27.2	6.1	- 1.4	-16.9	-16.2	-10.2			
Average 1950-54	2.1	8.0	8.8	10.8	17.0	27.7	6.9	-10.8	-15.5	-15.9	-15.6	-10.8	- 3.2	1.5
	(e) Net effective supply 5/													
1950	376.1	332.2	365.4	370.3	363.5	338.3	323.4	334.2	326.6	324.6	352.5	338.6	359.3	4,172.8
1951	384.3	369.2	406.1	406.3	381.9	369.5	358.8	355.2	342.6	332.1	351.1	355.3	382.0	4,425.2
1952	403.0	378.8	416.7	424.5	415.8	393.7	361.2	361.8	341.7	335.0	369.6	374.7	405.1	4,602.8
1953	419.6	370.7	407.7	431.1	407.3	398.1	363.7	373.3	359.3	348.0	375.8	387.5	412.4	4,683.8
1954	411.2	383.0	421.3	430.7	421.6	418.6	376.1	379.2	378.3	379.3	410.6	422.8	445.6	4,895.3
1955	436.7	398.3	438.1	455.0	433.0	425.0	397.0	400.9	400.8	396.3				
Average 1950-54	398.8	366.8	403.4	412.6	398.0	383.6	356.6	360.7	349.7	343.8	371.9	375.8	400.9	4,555.9
	(f) Average price received by farmers for eggs, mid-month, per dozen													
	Cents	Cents		Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1950	31.2	29.6		31.6	30.9	29.6	30.1	34.3	38.0	40.4	43.2	45.8	57.7	36.3
1951	42.6	41.4		43.7	43.2	45.2	44.7	46.6	49.6	55.0	55.6	56.5	51.1	47.8
1952	40.5	34.7		34.0	35.2	34.2	35.7	43.3	48.2	48.7	50.3	51.9	46.6	41.6
1953	45.8	42.0		44.7	45.5	45.9	45.7	47.7	50.2	51.4	53.2	49.7	48.5	47.7
1954	46.3	45.7		38.7	35.0	33.1	33.0	34.5	37.4	33.8	32.4	33.9	32.7	36.8
1955	32.2	39.5		39.7	35.9	33.8	33.8	35.2	39.4	43.8	42.9			
Average 1950-54	41.3	38.7		38.5	38.0	37.6	37.8	41.3	44.7	45.9	46.9	47.6	47.3	42.0

1/ As reported. 2/ Adjusted for length of month for better comparability with other months. 3/ Monthly totals and averages do not necessarily add to yearly figures due to rounding. The average price for 1954 is a simple average, other years are weighted by monthly sales. 4/ Plus sign indicates net into-storage movement; minus sign indicates net out-of-storage movement. 5/ Farm production minus eggs used for breaking and hatching, plus or minus storage movement.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

AGRICULTURAL OUTLOOK - THE LONGER-TERM PROSPECTS FOR DEMAND

Talk by James P. Cavin
Agricultural Economics Division
at the 33rd Annual Agricultural Outlook Conference
Washington, D. C., November 29, 1955

The attention of this Conference is focused as usual on the outlook for agriculture during the coming year. From time to time, especially since the close of World War II, there have been attempts to evaluate the longer-run outlook. In 1945, the Bureau of Agricultural Economics published a study under the title, What Peace Can Mean for American Agriculture, which projected levels of farm production, prices and income that might be expected under various assumed levels of employment in the year 1950. In 1948, the Bureau prepared for the Committee on Agriculture of the House of Representatives, a Study of Selected Trends and Factors Relating to the Long-Run Prospect for American Agriculture. This study was focused on a period centering around 1960, with respect to which it concluded that there were reasonable expectations for a high level of employment in this country, and that the prospects for American agriculture were relatively good.

Within the Agricultural Marketing Service, we have continued to do some work in updating longer-range analyses of the foregoing type, particularly with respect to changes in population trends and changes in relationships between consumer incomes and purchases of agricultural commodities. All such revisions, however, indicate that the long-run prospects for American agriculture continue to be favorable. If we look ahead again, say to about 1975, it would appear that with continued increase in population, rising real incomes, and a very moderate improvement in exports, there would be a market for farm products about 40 percent higher than during the past two years. However, with recent production running well ahead of utilization, this expanded market could be satisfied by a total agricultural output about one-third higher. This output was assumed to be saleable at about the level of prices received by farmers in 1953. In that year, the index of prices received by farmers averaged 258 (on the 1910-14 base), compared with an estimated 238 for this year; while the parity ratio was 92, compared with an estimated 84 for this year.

Today, however, I do not propose to describe possible conditions another 20 years or so ahead. I propose, instead, to talk in terms of the period some 3 to 5 years ahead. These years are particularly important for American agriculture. Views as to the economic position of agriculture in this period will have an impact on policies now in the making, while it is in this period that the impact of those policies should become clearly evident. Unfortunately, it is also a period for which our techniques of economic and statistical analysis appear to be less appropriate than for appraisal of the year just ahead or for the construction of models based on stable long-run trends projected well into the future.

Agriculture-Washington

My discussion will be divided, somewhat artificially, into two parts. The first, and briefest, will be concerned with the quantities of agricultural products which farmers may expect to sell in the period just ahead, and the second with the prices at which these quantities may be sold. Although my principal concern will be with quantities sold in the domestic market, I shall, for the sake of completeness, touch on the foreign market as well. I must warn you that I am not going to attempt to make any precise forecasts for the period under consideration. The best I can do is to re-examine the influence of some of the factors known to affect the demand for agricultural products, and to advance some rather tentative opinions as to how sales of farm products and the prices received for them may behave.

However, if we employ essentially the same techniques used in the longer-range projections, it would appear that, under conditions of high employment, the combined domestic and foreign markets for our agricultural commodities by the end of another 5 years would be perhaps 9 to 10 percent greater than during the past year or so. This increase in aggregate demand for farm products is based primarily upon continued population growth, which might be expected to add around another 12 million persons to the population; a 1 to 2 percent rise in the per capita consumption of food as a result of continued increase in consumer incomes; and small increases in the domestic disappearance of tobacco and cotton. Also in the picture would be an export demand not greatly different from that of the last 2 or 3 years. I will not go into any commodity detail at this time, although it may be pointed out that the principal reason for expecting some small increase in the level of per capita food consumption is due to expected increases in the per capita consumption of livestock products, fruits and vegetables, which would more than offset the long-time downward trends in grain products and potatoes.

This is all I am going to say about the quantity side of the picture, as there is not much doubt that with rising population and incomes, the aggregate market for American agricultural products is going to continue to increase. What is of most concern to the American farmer is not so much the ability of his customers, particularly the domestic customers, to utilize increasing amounts of agricultural commodities in the aggregate, but the prices he can expect to receive for the commodities which comprise that output. Our first chart illustrates this point. The dotted line is a recently compiled index of total utilization which measures the annual movement of all farm commodities into domestic food and nonfood uses, feed and seed uses, and exports. The rise of the index during the war years and its maintenance at a high level since then, indicates that the postwar demand, in the sense of ability to use farm products, is far above prewar, and I have indicated that it should continue to increase. The disheartening thing is the solid line, which is the familiar relation between prices received by farmers and prices paid by them; in other words, the parity ratio. The fluctuations in this index are obviously quite extreme. For example, prices received by farmers in 1929 averaged 92 percent of parity. Two years later they sold about the same aggregate quantity of farm products for prices equal to 58 percent of parity. During the year of peak Korean war demands,

they received prices averaging 108 percent of parity; and 3 years later they sold approximately the same volume of commodities at an average of less than 92 percent of parity.

I shall now review very briefly some of our attempts to account for the movements in prices received by farmers, and say something about the extent to which the usual demand and supply factors appear to be operating or failing to operate at the present time. In this connection, I realize that by bringing in the supply influence I am encroaching somewhat on the next paper, but I think you will find that this encroachment will not be very great.

For some years, statisticians in the Department have found it useful to measure the movements in farm prices in terms of a supply factor (farm output or marketings) and three demand factors: population, income per person, and the value of agricultural exports. The second chart shows the supply factor (farm output), together with two of the principal elements in demand; namely, population and per capita income. The importance of these two demand factors in providing a market for rising farm output is clearly evident. The third chart shows the volume and value of farm exports, the latter constituting our third demand factor. It can be seen that this is a highly volatile factor, and that it has been important in the postwar period. It is actually small relative to the domestic demand factors, although it is of crucial importance for such export crops as cotton, wheat, tobacco, rice and soybeans.

It is possible to measure the influence of these factors on prices received by farmers by the time-honored technique of multiple correlation analysis. I do not have charts to portray the relationships involved, but these can be explained rather simply. If we regard the index of prices received by farmers as being determined by three other series: disposable personal income, the value of agricultural exports, and the volume of farm marketings, we obtain a very reliable set of relationships for the period 1921-41. On the average, a 10-percent change in disposable income resulted in approximately a 12-percent change in prices in the same direction; a 10-percent change in the value of exports in a 1½-percent change, also in the same direction; and a 10-percent change in the volume of agricultural marketings in slightly more than a 16-percent change in the opposite direction. The predictive accuracy of these relationships has not been quite as high during the postwar period, but they have continued to provide a fairly satisfactory explanation of movements in agricultural prices through 1952. In an attempt to improve the measurement of the current influence of the several factors on prices, we recalculated the relationships, combining the postwar years 1947-54, with the prewar years 1921-41. This appreciably modified the relationships based on the prewar years alone. A 10-percent change in income now brings only slightly more than a 10-percent change in prices; a 10-percent change in the value of agricultural exports brings somewhat more than a 2 percent change; while a 10-percent change in marketings brings a change of somewhat more than 14 percent in the opposite direction. These revised relationships provide a somewhat better explanation of postwar price movements than the first set, but they have also failed signally to explain changes

in the level of agricultural prices since 1952. I am sure that a much better set of relationships than these can be developed, but for purposes of this exposition, I shall use them as a starting point.

Our next chart compares actual prices received by farmers with those estimated by applying the demand and supply factors provided by the second set of relationships. The two lines on the left are the actual and estimated prices for the prewar years. On the right are the actual and estimated prices for the postwar years. By and large, this estimating equation served quite well for the prewar period. It failed lamentably in 1947, and then gave reasonably satisfactory service during the next five years. But beginning in 1953, an alarming disparity has developed between actual and estimated prices. For example, actual prices this year will average out at around 238, or 84 percent of parity, whereas, given simply the statistical series employed in the correlation analyses, the calculated value of the index of prices received would be around 300, or about 115 percent of parity. This disparity between actual and estimated prices is not just some statistical freak. It reflects a pronounced shift in the position of agriculture relative to the rest of the economy. This is shown in a most striking fashion by the next chart in which the long-time movement of farm income is compared with that of national income.

Explanations of this phenomena are legion. There are supply explanations suggesting cost reductions resulting from technical innovations, and the accumulation of excess stocks. There are demand explanations stressing the very low price and income elasticity of demand for farm products, the slowing up of food purchases in relation to income at high levels, and shifts in consumer demand toward more processing and services relative to quantities purchased. Also stressed are widening marketing margins attributable to such factors as higher wages and increased freight rates. Finally, there are explanations which emphasize the decline in foreign demand, the loss of foreign markets, and the general world-wide tendency toward overproduction of agricultural products.

I have no doubt that all of these factors may be contributing to the current abnormal behavior of prices received by farmers. Of these, however, there appear to be two which are particularly important, and whose influence can at least be partially evaluated in terms of the supply-demand factors which have just been outlined.

The first concerns the relation between consumer food purchases and consumer incomes. The contention that the effects of consumer income tend to become less important after certain levels are reached is very much in accord with economic theory, and is consistent with the statistical data used. This is perhaps most easily illustrated by referring to a particular commodity. The accompanying chart shows historical relationships between the retail value of meat consumed and disposable income per person. Here again, we note the very good prewar relationships, the continuation of these relationships during part of the postwar period, and the recent marked flattening out of expenditures for meat relative to available income. The data used in our overall estimating equation also indicate that some flattening out of the relationship

between prices received by farmers and consumers' incomes is called for. I have made a rough free-hand adjustment of this, as a result of which, the differences between actual and estimated prices in 1954 and 1955 are appreciably reduced. For the latter year, our estimated index of prices received would decline from the original estimate of 300 to 283, compared with an actual level of 238, while the predicted parity ratio would decline from 115 to 100, compared with an actual ratio of 84.

The second factor that undoubtedly accounts for much of the discrepancy between actual and estimated prices, is the recent tendency for the production of agricultural commodities to outrun total utilization, accompanied by accumulation of excess stocks. There do appear to be periods where the building up of stocks has a depressing effect on prices over and above that which we can attribute to the volume of farm marketings. For example, this effect appears to have been particularly large, not only last year and this year, but also in 1931 and 1932. In all of these years, our estimating equations have indicated prices considerably above those actually received. Unfortunately, it is difficult to get a fully satisfactory measurement of stocks and to isolate their influence. However, we have been able to make an estimate of the approximate amount by which the total supply of agricultural commodities has exceeded total utilization during the past several years. If this aggregate of farm commodities is regarded as having the same price-depressing influence as an equivalent addition to the volume of farm marketings in each of those years, a considerable further reduction in the disparity between actual and estimated prices is obtained. For 1955, for example, our estimated index of prices received would be reduced to about 255, compared with the actual level of 238; while the parity ratio would drop to about 90, compared with an actual ratio of 84.

These two factors, then, the declining influence of consumer income, and the production of excess supplies, would account for about 70 percent of the difference between actual and estimated prices this year. And I think a reasonable case can be made in support of this conclusion. The other factors we have mentioned can doubtless be appealed to as the cause of the remaining discrepancy. I am quite certain; for example, that the rise in marketing costs is in the picture, and it is also possible that our export demand factor overstates the effect of this variable. The value of agricultural exports is a rather indirect measure of foreign demand for our products, and since a large proportion of our agricultural exports in the postwar years have been Government financed, it may well be that our equation currently overstates its importance. However, I have not been able to develop even a rough statistical basis for handling either of these influences.

However, if we assume that all of the remaining difference between actual and estimated prices is due to factors which have permanently reduced the level of farm prices, and that my correction for the reduced effect of income on prices is approximately correct, then the elimination of the excess supply factor would result in a 1955 level of prices received in the range of 260-265, or around 93 percent of parity. In other words, I would venture the opinion that this year's level of agricultural prices is perhaps as much as 10 percent below a

normal full employment level, and that we would move back toward this level to the extent that the balance between production and utilization of farm commodities is restored.

Before turning to the period ahead, I shall mention one of the things that is usually brought up in connection with a statistical analysis of the foregoing type; namely, that the effects of price supports have not been included, and that without such supports, prices received by farmers would be lower and the discrepancy between actual and estimated prices would be larger. I recognize this, and would like to make several comments on this point. First, the discrepancy between price-supported basic commodities and prices of all other farm products has not been an important factor for most of the years included in the analysis. This can be seen from the next chart. Second, in order to make an adjustment for the effects of price support and related programs, it would be necessary to introduce into the analysis a further set of estimates of the levels of production and exports that would have appeared over the years in the absence of these programs. Here again, we do not currently have a satisfactory basis for introducing such a refinement. Third, I think that even if we could make some such adjustments, the most likely result would be to increase somewhat the negative influence of the supply factor on prices as compared with the one being used here. This certainly would be a desirable improvement in our measurement of the impact of supply and demand factors on prices, but I do not think it would affect the general conclusions as to the current causes of relatively low farm prices or with respect to the levels that such prices might reach under a more balanced supply and demand situation.

Returning to the main theme, it is my opinion that the conclusions with respect to the current year are also applicable to the period 3 to 5 years ahead. That is, to the extent that we can achieve a production-disappearance balance in that time, prices might be expected to move back toward the level just indicated.

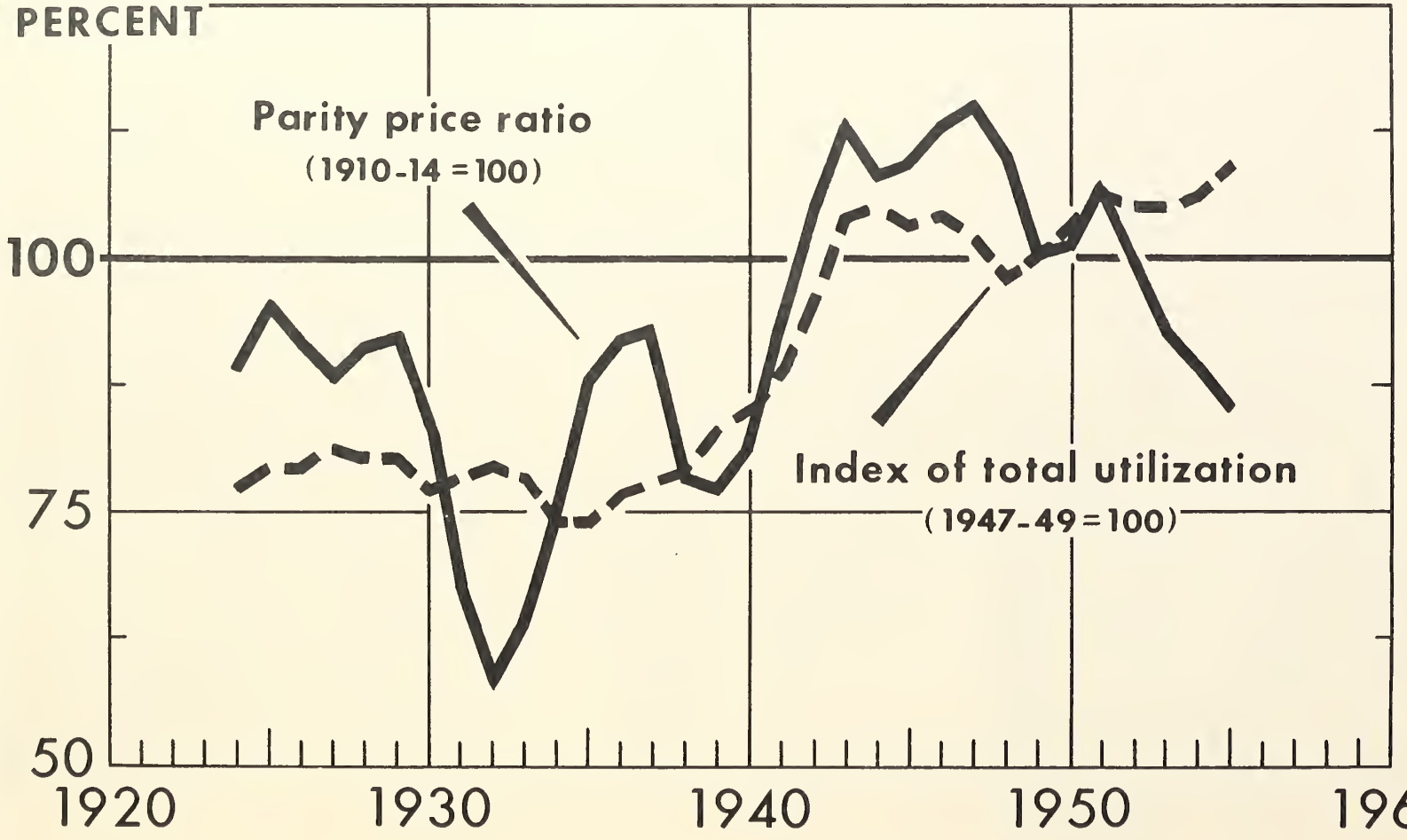
But, I think the question we are really most concerned with is not how high prices might rise if a normal supply-price balance could be achieved, but whether we are likely to make any appreciable progress in that direction in the period just ahead. Certainly, no one would expect full equilibrium to be attained, as production is currently outrunning total demand and increases in output needed to fulfill the estimated 10 percent increase in requirements by the end of another 5 years would require an appreciably smaller increase in output percentagewise.

However, I do not think we should lose sight of the positive factors in the picture. First, there are a number of commodity areas where we might well expect the production-consumption situation over the next 3 to 5 years to be a more favorable one from the point of view of farmers' price prospects. These would include meat animals and a considerable segment of fruits and vegetables. Second, continued movement of people out of agriculture and further intensification of the cost-price squeeze are factors which work in the direction of restraining output. Third, farm programs should be able to contribute materially to achieving a better balance within agriculture and between agriculture and the rest

of the economy. Finally, the present low level of farm prices relative to other prices under conditions of such high demand is unique in our economic history. There are certainly some grounds for thinking that the powerful influence of rising productivity and income for the Nation as a whole will begin to have some positive effect on farm prices and incomes in the not too distant future. The marked historical relationship between farm income and national income is not to be dismissed lightly. In this connection, improvement in the position of prices received relative to prices paid could also come about as a result of some decline in the latter, as well as some rise in the former.

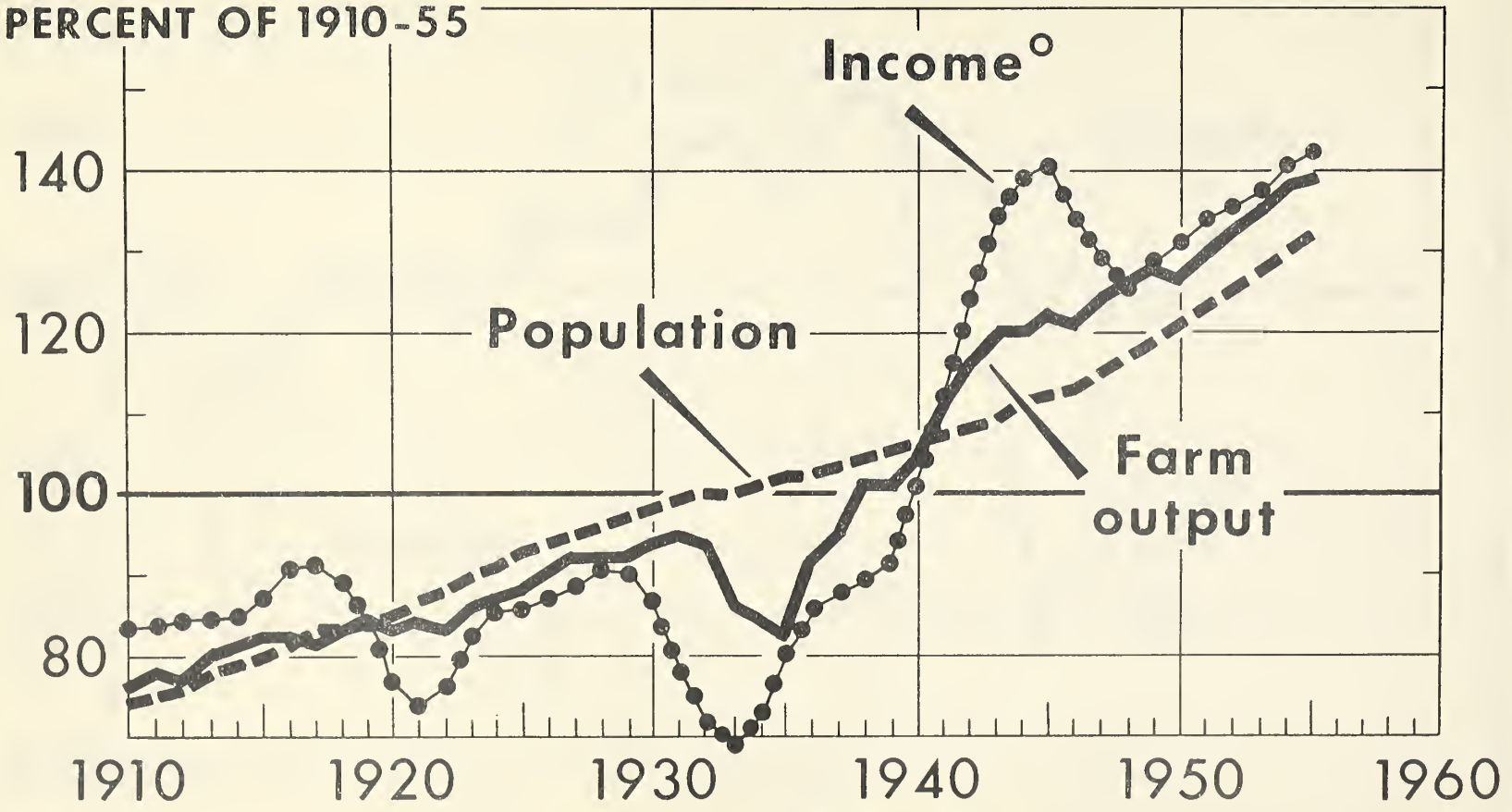
It may well be, and I suspect it coincides with the weight of current opinion, that agricultural production will continue to outrun total demand, with further depressing effects on prices received by farmers. However, it may also be that in our concern with surpluses and the amazing advances in agricultural productivity, we are perhaps underestimating the factors of strength on the demand side, and the possibility of some improvement of the relative price position of farmers some 3 to 5 years ahead.

UTILIZATION OF AGRICULTURAL PRODUCTS AND PARITY RATIO



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FARM OUTPUT, POPULATION, AND INCOME*



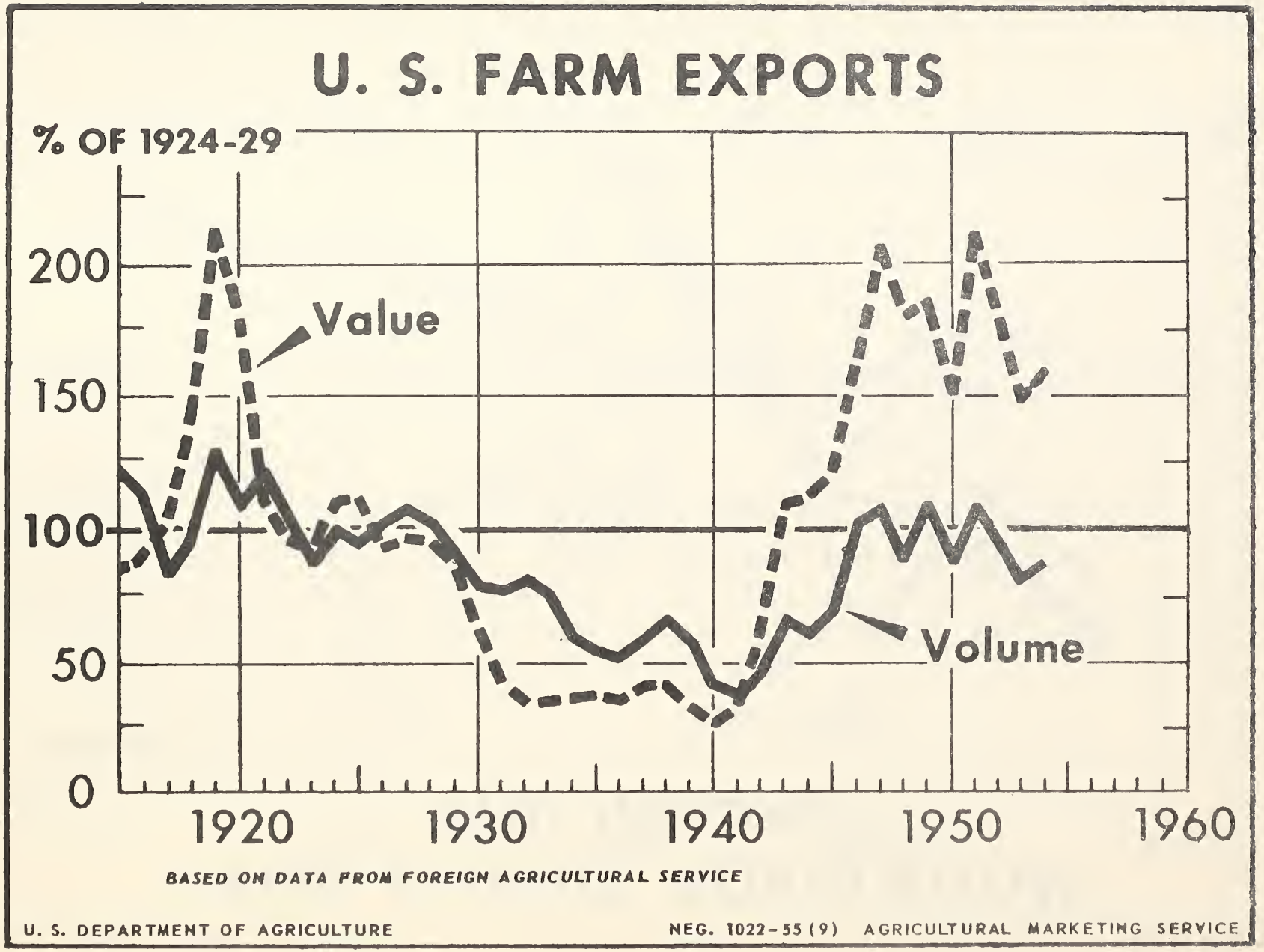
*3-YEAR MOVING AVERAGES

° DISPOSABLE INCOME PER PERSON DEFLATED BY CONSUMER PRICE INDEX

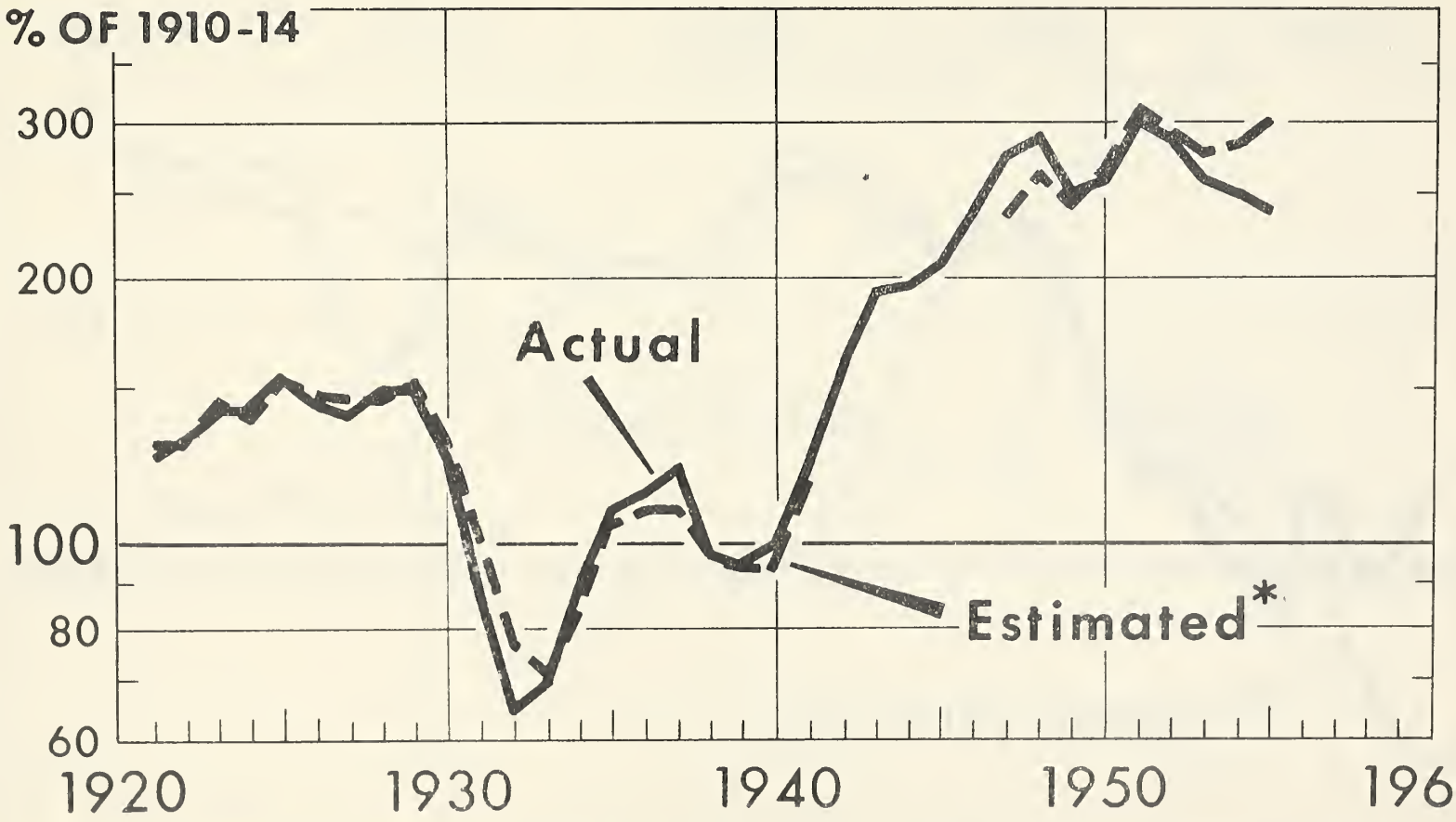
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671


U. S. FARM EXPORTS
% OF 1924-29
200
150
100
50
0
Value
Volume
1920
1930
1940
1950
1960
BASED ON DATA FROM FOREIGN AGRICULTURAL SERVICE
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1022-55 (9) AGRICULTURAL MARKETING SERVICE

PRICES RECEIVED BY FARMERS
ACTUAL AND ESTIMATED

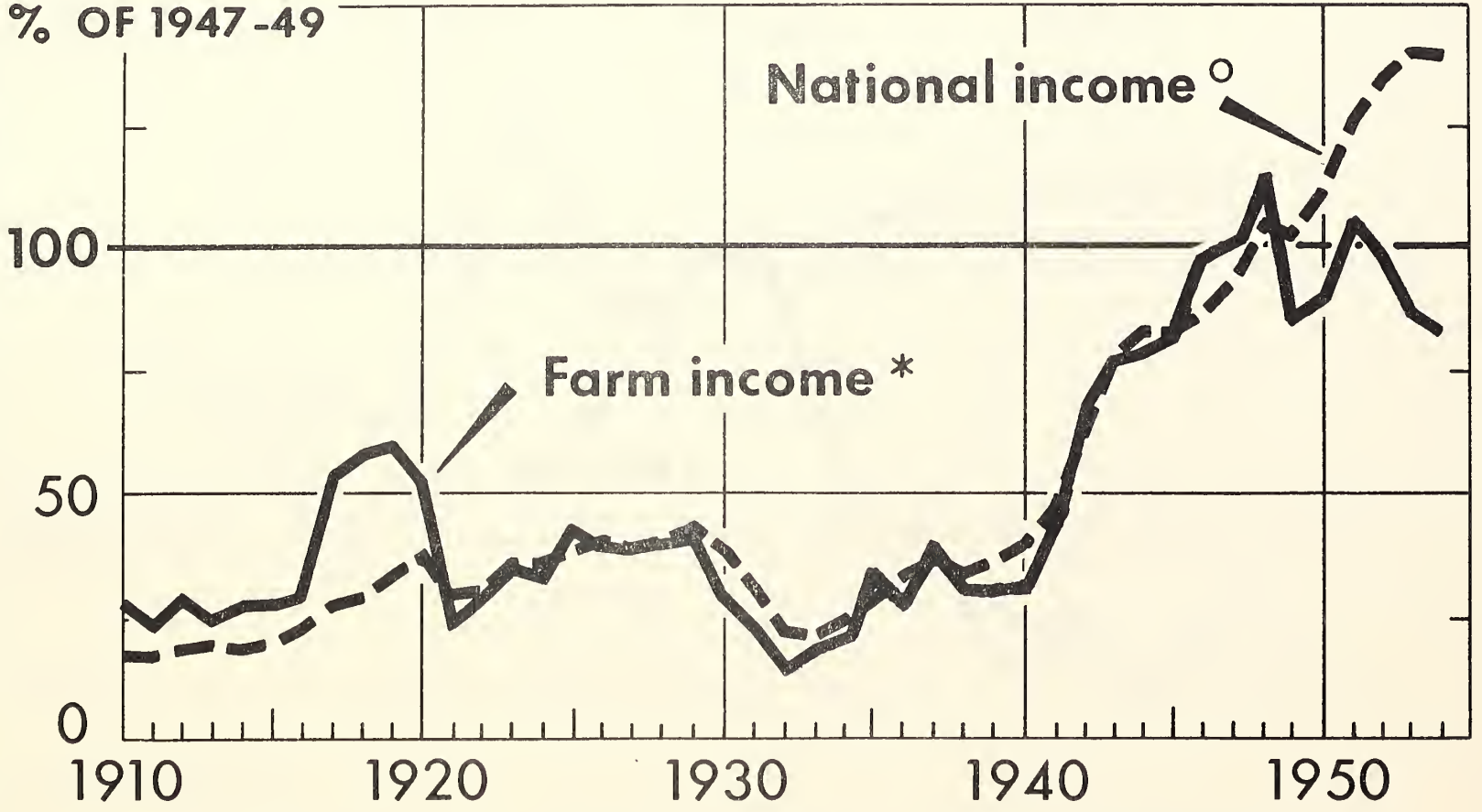


*ESTIMATED FROM RELATIONSHIPS WITH DISPOSABLE INCOME, FARM MARKETINGS, AND AGRICULTURAL EXPORTS

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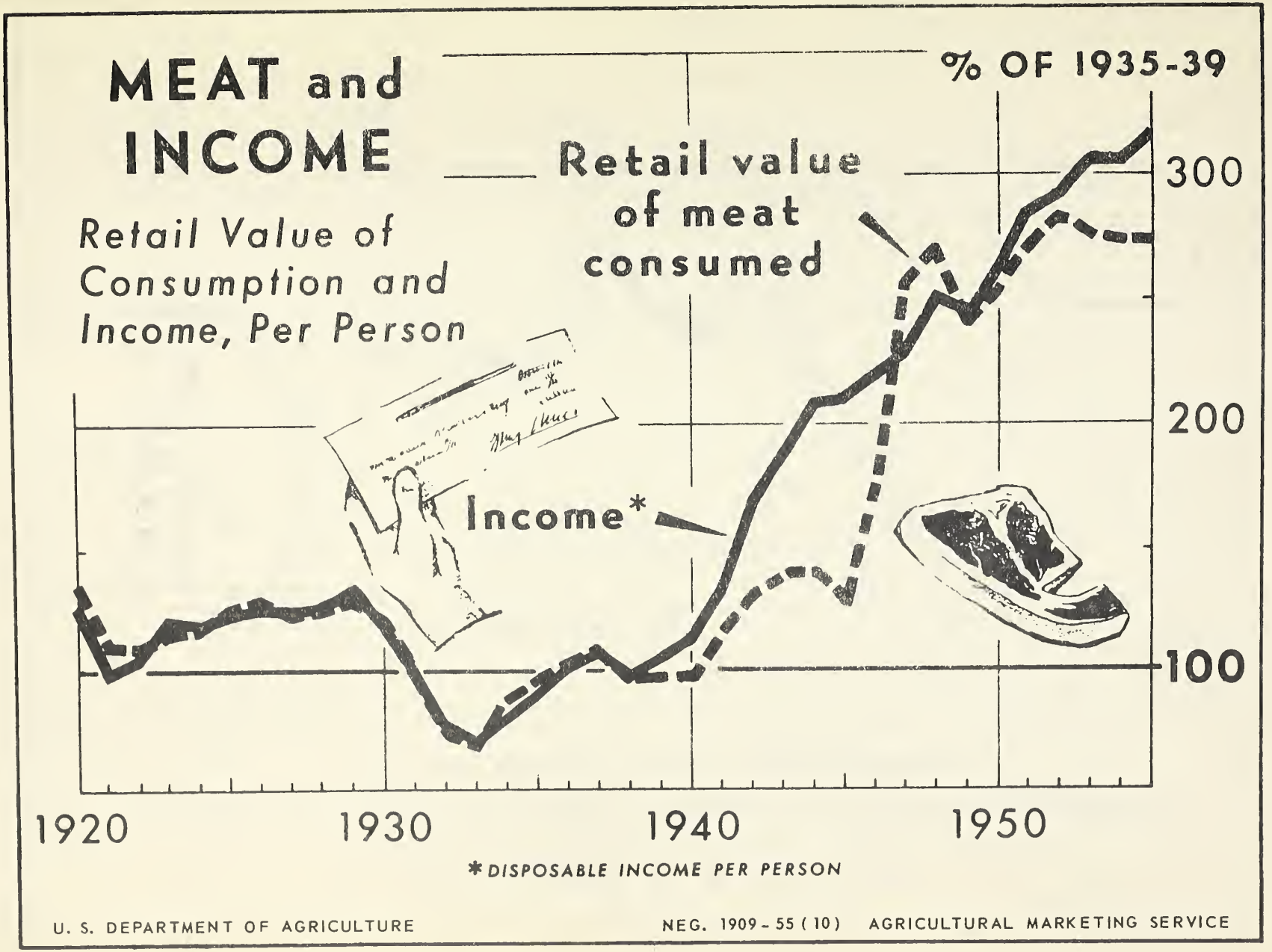
NATIONAL AND FARM INCOME



* FARM INCOME REFERS TO NET INCOME FROM AGRICULTURAL SOURCES TO PERSONS LIVING ON FARMS

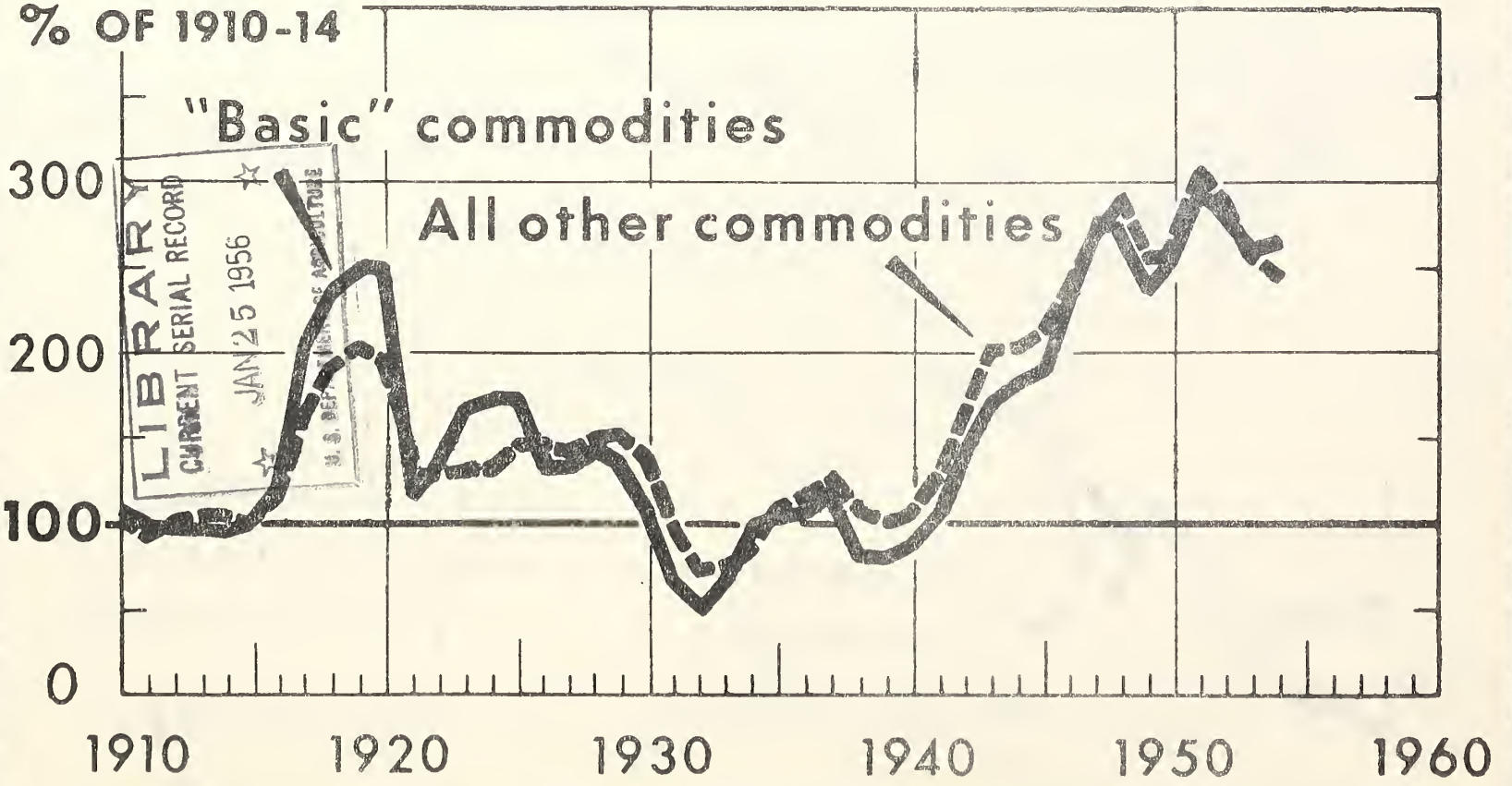
° DEPARTMENT OF COMMERCE ESTIMATES OF NATIONAL INCOME HAVE BEEN ADJUSTED TO MAKE THEM COMPARABLE WITH FARM INCOME ESTIMATES

U. S. DEPARTMENT OF AGRICULTURE NEG. 1729-55 (11) AGRICULTURAL MARKETING SERVICE


MEAT and INCOME
Retail Value of Consumption and Income, Per Person
% OF 1935-39
Retail value of meat consumed
Income*
300
200
100
1920
1930
1940
1950
*DISPOSABLE INCOME PER PERSON
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1909-55 (10) AGRICULTURAL MARKETING SERVICE

FARMERS' PRICES

*Comparison of Prices for Price-Supported "Basic" Commodities * With Prices of All Other Commodities*



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*WHEAT, CORN, COTTON, RICE, PEANUTS AND TOBACCO.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

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THE OUTLOOK FOR VEGETABLES IN 1956

Statement presented by Will M. Simmons at the 33rd
Annual Agricultural Outlook Conference
Washington, D. C., December 1, 1955

Several speakers have already outlined the prospect of a continued high level of employment and income in 1956. Some have dealt in considerable detail with the anticipated level of important components of National income. In this generally healthy economic atmosphere, consumer demand for fresh, frozen and canned vegetables is expected to be at least as strong in 1956 as in the current year. Thus, the kind of year which farmers who grow vegetables for fresh market sale experience financially in 1956 will depend in large measure on the volume produced and marketed. If production in the coming year is kept about in line with the marketing guides issued by the Department of Agriculture, prices may rise moderately above 1955 levels. However, the situation will vary considerably, and the coming year is not expected to be uniformly good for all crops. If the disappearance rate of processed vegetables during the next several months is as high as is presently anticipated, processors may be expected to seek a larger pack of a number of canned and frozen vegetables. Consequently, acreages of a number of processing crops probably will be up from those of a year earlier, and prices received by growers for these crops may average higher than in the 1955 season.

Present indications are that, in general, equipment, materials and facilities needed to produce, package and distribute vegetables will be in ample supply at least during the first half of 1956. However, production costs probably will be a little higher than in the current year.

COMMERCIAL FRESH VEGETABLES

Total production of commercial vegetables for fresh market sale in 1956 may not differ materially from that of 1955. At present official estimates of acreages of winter vegetables are available for only 8 crops. Of these, indicated acreages of artichokes, cabbage, lettuce and early potatoes are above those of 1955, while acreages of asparagus, beets, kale and spinach are down. Acreage of shallots for winter harvest is reported to be the same as a year earlier. In the aggregate the indicated 1956 acreage is about 3 percent larger than in 1955 and about 8 percent above the 1949-54 average. With average yields, tonnage of these 8 vegetables would be only slightly larger than in the winter of 1955. The Department's guide for vegetables for 1956 spring harvest suggest a 2 percent smaller acreage than in 1955. On the acreage recommended, yields near the average of recent years would result in a moderately smaller tonnage of spring vegetables than in 1955.

Agriculture-Washington

United States foreign trade in vegetables is relatively small compared with total production. But exports and imports are important to some areas, particularly in the winter harvest season. In Canada, the chief customer for our exports, demand for fresh vegetables is expected to continue strong and exports of winter vegetables are likely to be a little larger than in 1955. On the other hand, indications are that the imports of winter vegetables from Cuba and Mexico will be substantially above the light volume of last winter.

Because of the seasonal and geographic dispersion of vegetable crops grown for fresh market sale, and the inherent characteristics which make these crops peculiarly susceptible to forces causing wide price swings, it is not feasible to make such sweeping forecasts for vegetable crops as may be made in a number of other agricultural products. Nevertheless, by putting our work in the proper perspective we can contribute to the total knowledge and thus aid the industry in anticipating probable market conditions and needed adjustments.

VEGETABLES FOR COMMERCIAL PROCESSING

As you know, processed vegetables still make up less than half of total vegetables consumed (fresh equivalent basis); but the use of processed vegetables both in pounds and relative to total vegetables has increased greatly during the past 15-20 years. The per capita disappearance of processed vegetables (fresh equivalent) rose from 57 pounds in 1937-39 to 88 pounds in 1952-54, a rise of more than 50 percent. During this same period per capita disappearance of fresh vegetables increased from 114 to 119 pounds--an increase of only 4 percent.

Supplies of processed vegetables available into mid-1956 are not expected to differ much from quantities available in the corresponding months of 1955. This is true both of canned and of frozen vegetables. Indications are that a slightly higher 1955 pack will about offset the smaller carryover stocks. In general, individual items appear to be in better balance with anticipated market requirements than was the case a year earlier. Supplies of sweet corn and sauerkraut appear to be materially smaller than the relatively heavy supplies of early 1955. On the other hand, tomatoes and most tomato products, green peas, asparagus and spinach should be in more plentiful supply than a year earlier. The supply of snap beans in the early part of 1956 probably will be about the same as the relatively large supply of early 1955.

With better balanced supplies and the prospect of continued strong demand, retail prices of processed vegetables in the first half of 1956 are expected to average a little higher than in the corresponding months of 1955. There is as yet no indication as to the probable 1956 acreage of vegetables for commercial processing. However, the generally good disappearance rate of processed vegetables in the current year, and expected firmness in retail prices probably will result in some net increase in processor demand for vegetable crops for the 1956 pack. Among the processing crops, packers are likely to seek increased acreages of sweet corn,

cabbage for kraut and perhaps lima beans. Processors may well increase the pack of whole canned beets in 1956, but there probably will be little change in total pack of beets. Past experience indicates that prices received by growers for vegetables for processing generally have moved in the same direction as contracted acreage.

Canned vegetables still account for about 6 out of every 7 pounds of processed vegetables consumed in this country. But use of frozen vegetables has increased rapidly. With improving technology, larger consumer incomes and the trend toward more "convenience food preparation," frozen vegetables are likely to continue to increase in volume per capita and relative to the canned and fresh components.

DRY BEANS AND PEAS

The United States has had a surplus of dry edible beans throughout the postwar period, and with the large 1955 crop, supplies are likely to continue burdensome in the year ahead. But the situation offers some encouraging aspects. The distribution of production of the various types of beans appears to be better balanced than a year earlier. A larger proportion of the supplies consists of white beans which move well both in domestic and foreign markets.

The national average support price for dry edible beans has been lowered. Beans from the 1955 crop will be supported at a national average price of $6.36 per 100 pounds, basis U. S. No. 1 beans. This is about 88 cents per hundred pounds lower than the support rate for 1954 crop beans.

Better balanced supplies and lower support prices are expected to encourage some increase in domestic use, and somewhat larger exports of beans in 1956 compared with a year earlier. If anticipated market requirements materialize, the coming year promises to be one in which total utilization may exceed the 1955 production and result in some slight reduction in stocks.

In contrast with the surplus situation in dry edible beans, supplies of dry field peas in 1956 may prove barely adequate to meet a smaller total demand. As a result of extremely low yields in Washington and Idaho the 1955 crop was down almost one-fifth from that of 1954 and was the second smallest since 1940. Domestic demand in the coming year is not expected to differ significantly from that of 1955. But export demand is expected to be down substantially from the 1955 level when supplies in Europe were extremely tight because of virtual crop failure in 1954.

Prices into mid-1956 are expected to continue well above the 1949-53 average, but because of the weaker export demand probably will average moderately below the high level of 1955. With the relatively high prices for the last two crops, farmers are expected to plant at least as large an acreage to peas in 1956 as in 1955.

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Agricultural Marketing Service

Mid-Year Outlook for Livestock

by Harold F. Breimyer
Agricultural Economics Division

Summary prepared for regional outlook meetings at
Bozeman, Montana and Battle Creek, Michigan

1. Present outlook for meat animals is dominated by large production. Cattle numbers have been at all-time high since 1953, while hog production is in second year of expansion. Meat output surpassed the wartime high in 1954 (upper chart, p. 2). This year it may be up 5 percent more to 26.7 billion pounds.

2. At this output, consumers are being provided more meat than in any previous year except 1908. 1955 consumption of all meat per capita may be about 160 pounds (lower chart, p. 2). All the increase from last year's 153 pounds is in pork. Consumption of beef is about steady at last year's record 79 pounds.

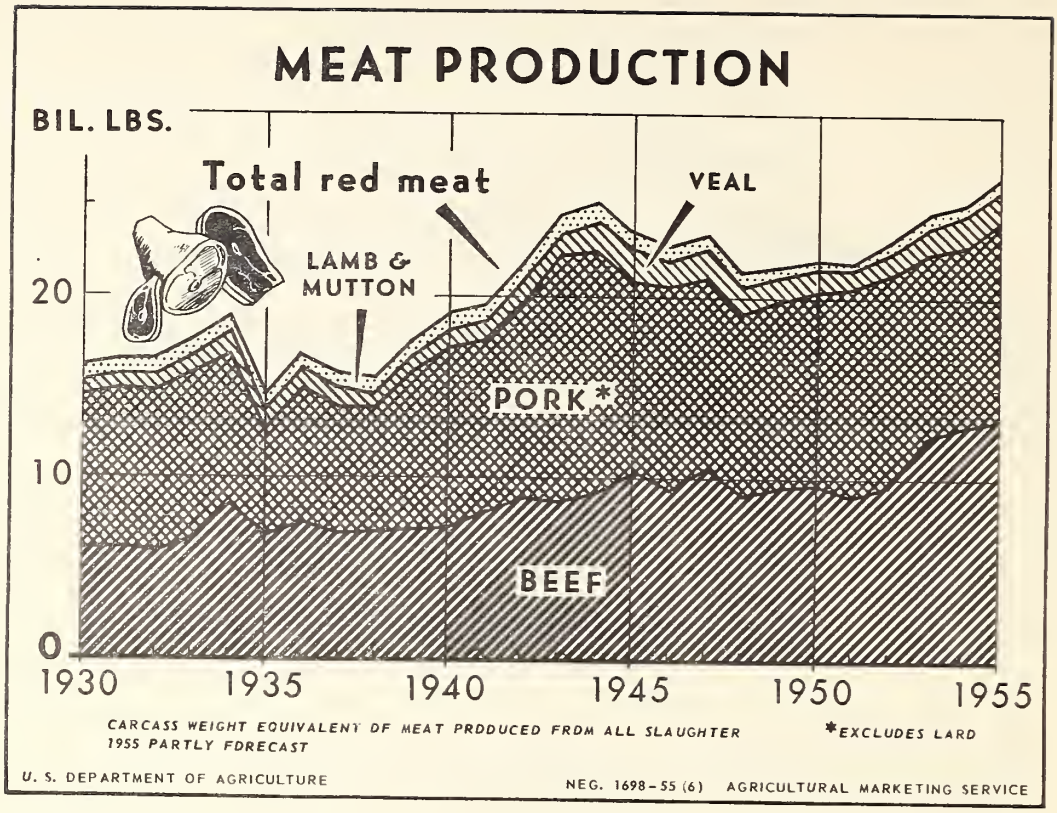
3. The 1955 spring pig crop was up 9 percent, and 11 percent more fall farrowings were planned by producers (upper chart, p. 3). Total 1955 crop is estimated at 101 million, second only to 1951 for peacetime. Supplies of hogs and pork per person are about average; but demand for pork is not as strong relative to incomes now as formerly.

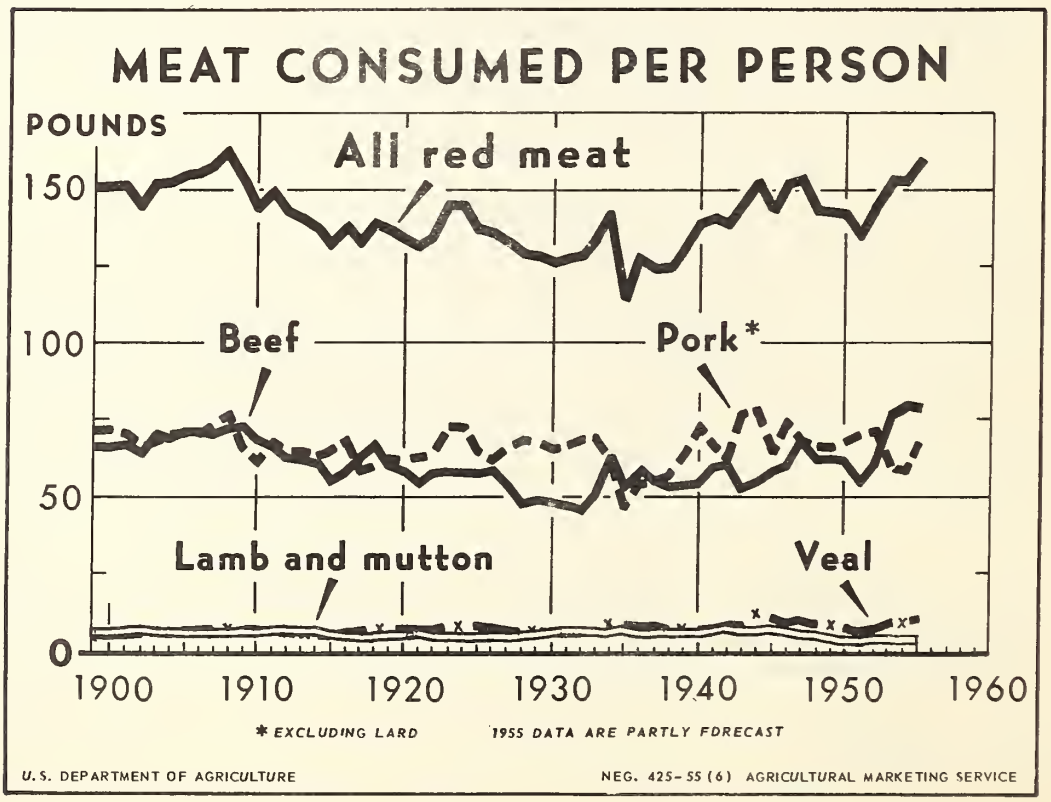
4. Combined cattle and calf slaughter in first half-year was 2 percent greater than last year. Slaughter of cows and heifers is outrunning last year; that of steers is down, and of calves unchanged (lower chart, p. 3). Slaughter rates point to little trend in cattle inventories, which have been nearly steady for 2 years (upper chart, p. 4); but a small decrease is more likely than an increase.

5. New highs in employment and income are helping to sustain demand for the large meat supply. Bumper feed harvests in prospect in early July may result in somewhat lower feed prices. But profit margins in producing meat animals are likely to be rather narrow. Cattle prices have been generally stable since mid-1953 (lower chart, p. 4). Fluctuations will continue to be mainly seasonal. Fed steer prices are expected to show some seasonal strength this fall, but feeder cattle will likely be seasonally lower. Prices of hogs also will decline seasonally during fall, and will be considerably below last fall.

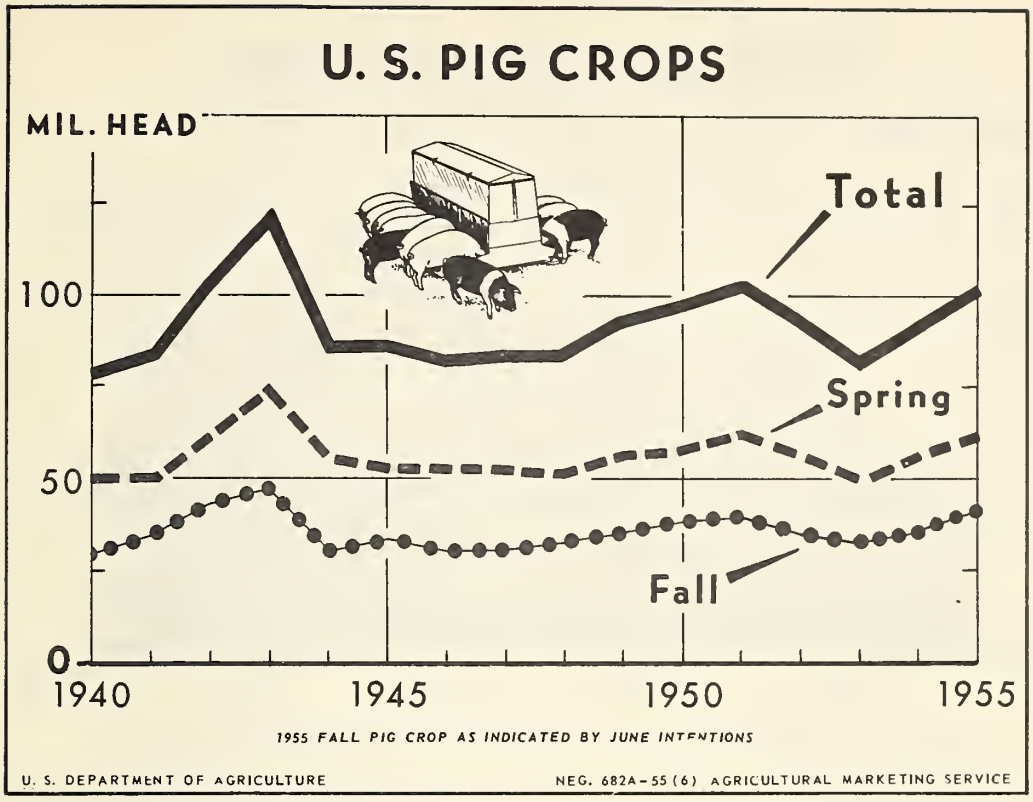
6. First half slaughter of sheep and lambs was 5 percent above 1954. Second half slaughter will not show such an increase. Lamb prices will again be influenced by large supply of other meats, and may average not greatly different from last year.

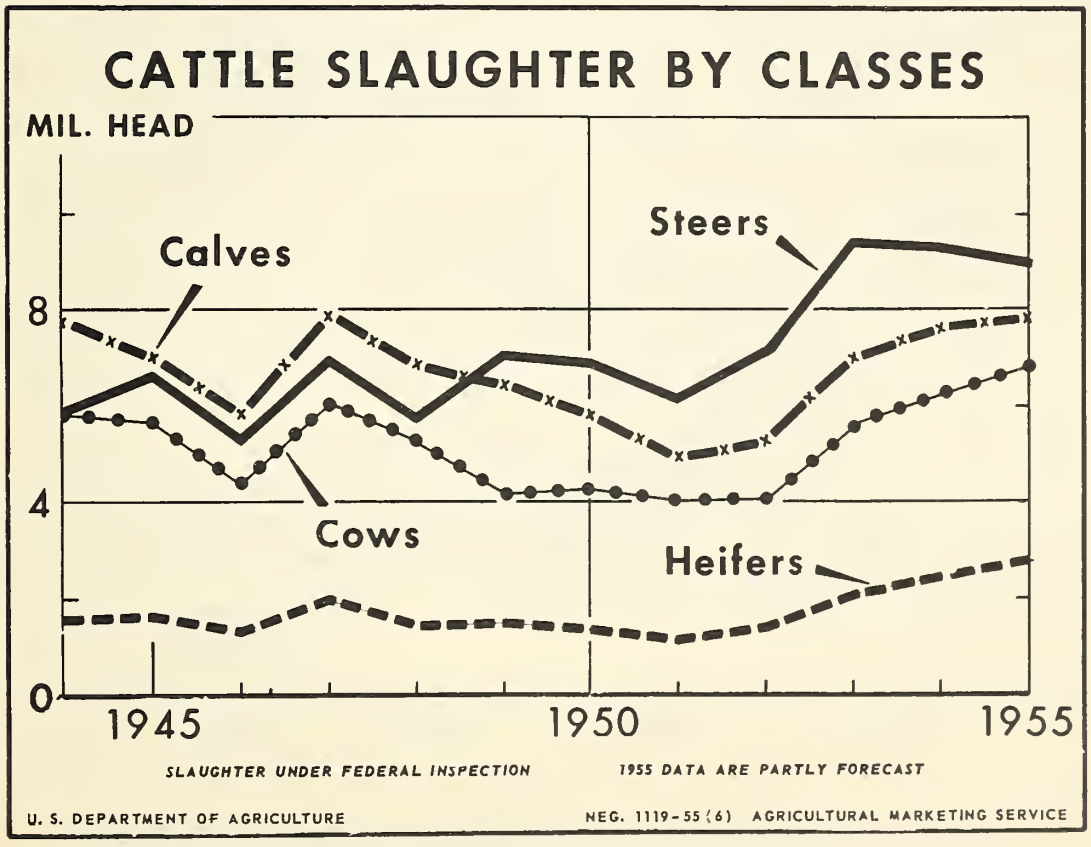
Agriculture-Washington July 1955

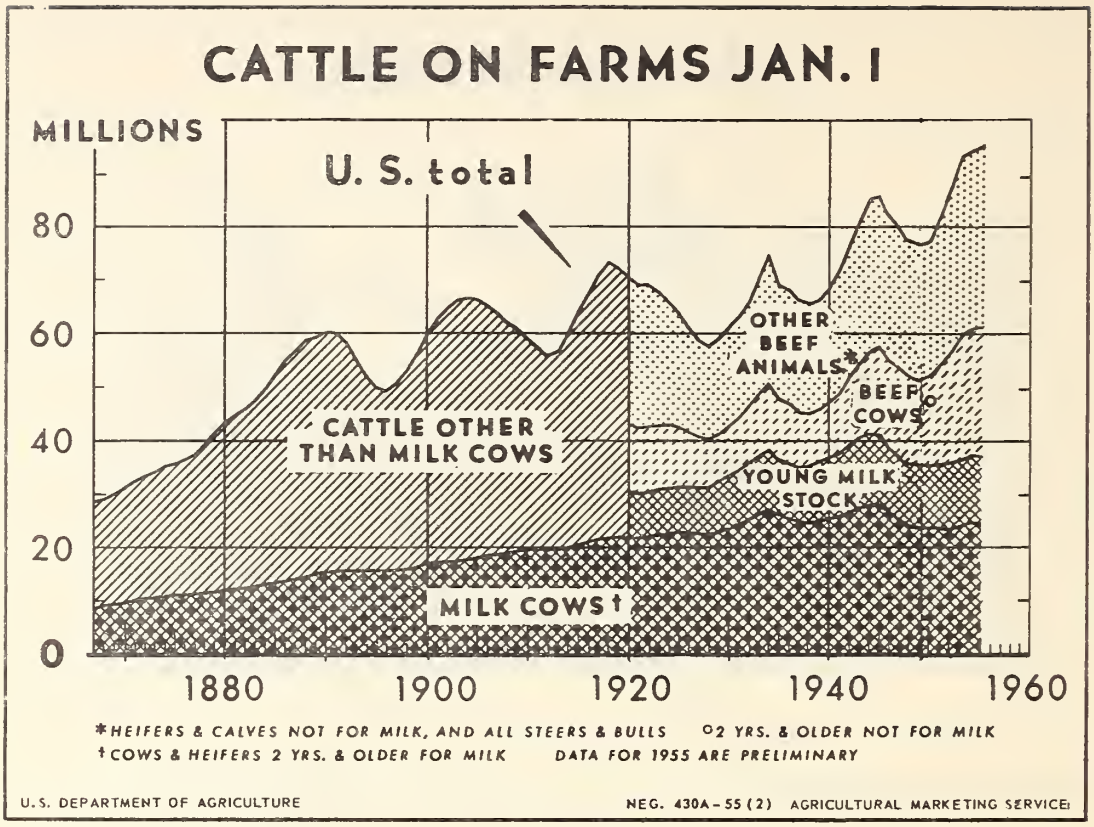

MEAT PRODUCTION
BIL. LBS.
Total red meat
VEAL
LAMB & MUTTON
PORK *
BEEF
20
10
0
1930
1935
1940
1945
1950
1955
CARCASS WEIGHT EQUIVALENT OF MEAT PRODUCED FROM ALL SLAUGHTER
1955 PARTLY FORECAST
*EXCLUDES LARD
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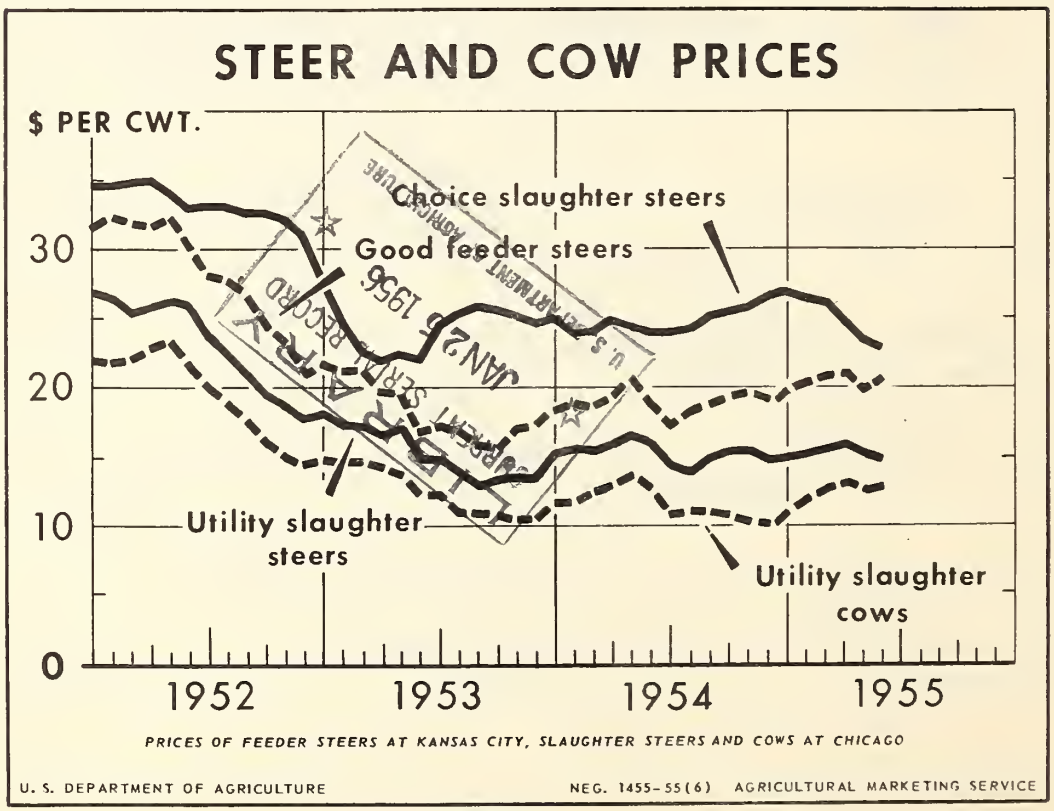

MEAT CONSUMED PER PERSON
POUNDS
All red meat
150
100
Beef
Pork*
50
Lamb and mutton
Veal
0
1900
1910
1920
1930
1940
1950
1960
* EXCLUDING LARD
1955 DATA ARE PARTLY FORECAST
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685


U. S. PIG CROPS
MIL. HEAD
Total
Spring
Fall
100
50
0
1940
1945
1950
1955
1955 FALL PIG CROP AS INDICATED BY JUNE INTENTIONS
U. S. DEPARTMENT OF AGRICULTURE
NEG. 682A-55 (6) AGRICULTURAL MARKETING SERVICE


CATTLE SLAUGHTER BY CLASSES
MIL. HEAD
Calves
Steers
Cows
Heifers
8
4
0
1945
1950
1955
SLAUGHTER UNDER FEDERAL INSPECTION
1955 DATA ARE PARTLY FORECAST
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1119-55 (6) AGRICULTURAL MARKETING SERVICE


CATTLE ON FARMS JAN. 1
MILLIONS
U. S. total
80
60
40
20
0
OTHER BEEF ANIMALS*
BEEF COWS°
CATTLE OTHER THAN MILK COWS
YOUNG MILK STOCK*
MILK COWS†
1880
1900
1920
1940
1960
*HEIFERS & CALVES NOT FOR MILK, AND ALL STEERS & BULLS
°2 YRS. & OLDER NOT FOR MILK
†COWS & HEIFERS 2 YRS. & OLDER FOR MILK
DATA FOR 1955 ARE PRELIMINARY
U.S. DEPARTMENT OF AGRICULTURE
NEG. 430A-55(2) AGRICULTURAL MARKETING SERVICE


STEER AND COW PRICES
$ PER CWT.
Choice slaughter steers
Good feeder steers
Utility slaughter steers
Utility slaughter cows
30
20
10
0
1952
1953
1954
1955
PRICES OF FEEDER STEERS AT KANSAS CITY, SLAUGHTER STEERS AND COWS AT CHICAGO
U. S. DEPARTMENT OF AGRICULTURE
NEG. 1455-55(6) AGRICULTURAL MARKETING SERVICE

90
028

687

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

THE OUTLOOK FOR RICE IN 1956

Statement presented by Robert E. Post at the 33rd
Annual Agricultural Outlook Conference,
Washington, D.C., December 1, 1955

The outlook for rice centers around record large supplies, with sharply increased carryover stocks. Rice supplies for the year beginning August 1, 1955, are estimated at 79.5 million cwt., in terms of rough rice. The sharp increase in the carryover much more than offsets the reduction in production. The carryover jumped from 7.6 million cwt. (in terms of rough rice) on August 1, 1954 to 26.7 million cwt. last August.

Domestic disappearance of rice for 1955-56 is estimated at 27.3 million cwt., in terms of rough rice. This is slightly less than the 27.7 million cwt. estimated for 1954-55. Exports for 1955-56 are uncertain at this time. However, they are likely to be considerably higher than in the past year but probably not as large as some other recent years. Exports of as much as 25.5 million cwt. would be required to prevent a further increase in carryover on August 1, 1956. Exports totaled 14.4 million cwt. in 1954-55, and 25.2 million in the peak year of 1952-53.

World export prospects are good in spite of prospects of another large world rice crop this year. Carryover stocks of poor quality rice, which have plagued the world market in recent years, appear to have been largely disposed of during the past year. The largest rice stocks are currently located in the United States. In fact, supplies are so large as to constitute over half of the world's export availability. This being the case, this country will play an important role in determining the world price level.

Under provisions of existing legislation and with the large supplies available, acreage allotments and marketing quotas will need to be proclaimed for the 1956 crop. With the reduction in the 1956 national acreage allotment at not more than 15 percent set by legislation for 1956, the allotment will be set at 85 percent of the allotment established for the 1955 crop. This would indicate an acreage of about 1,640,000 acres (including minor producing States), compared with 1,852,000 acres in 1955 and 2,476,000 in 1954. If marketing quotas are approved, the actual acreage seeded will be close to the alloted acreage.

The average price of rice to farmers in mid-October at $4.60 per cwt. was slightly below the $4.66 national average support level, above the low of $4.11 of mid-August, and above the $4.47 of a year earlier. The 1955 national average support price of $4.66 per cwt. of rough rice compares with $4.92 a year ago. Farmers had placed a total of 2.6 million cwt. of rice under support as of October 15, which compares with 5.0 million cwt. a year earlier.

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